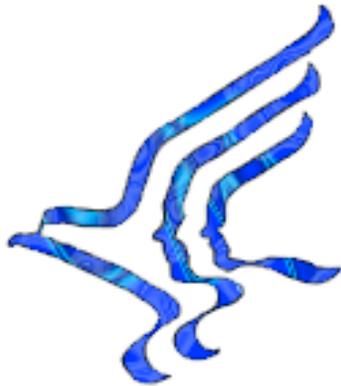


TANF

SAMPLING AND STATISTICAL METHODS MANUAL



October 1999

TANF

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TANF

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1100 INTRODUCTION

Title I of the Personal Responsibility and Work Opportunity Reconciliation Act of 1996 (PRWORA) establishes the Block Grants for Temporary Assistance for Needy Families (TANF) Program by amending Titles IV-A and IV-F of the Social Security Act. The purpose of this welfare reform initiative, which replaced the Aid to Families with Dependent Children Program and the Jobs Opportunity and Basic Skills Program, is to increase the flexibility of States and Tribal grantees in operating a program designed to:

1. Provide assistance to needy families (cases) so that children may be cared for in their own homes or in the homes of relatives;
2. End the dependence of needy parents on government benefits by promoting job preparation, work, and marriage;
3. Prevent and reduce the incidence of out-of-wedlock pregnancies and establish annual numerical goals for preventing and reducing the incidence of these pregnancies; and
4. Encourage the formation and maintenance of two-parent families.

While the TANF provisions allow States and Tribal grantees discretion as to the mechanisms used in meeting these goals, they place on States and Tribal grantees a responsibility for measuring, tracking, and reporting on their reform initiatives.

The Personal Responsibility and Work Opportunity Reconciliation Act of 1996 requires States and Tribes to collect on a monthly basis and report to the Secretary of the Department of Health and Human Services (DHHS) on a quarterly basis a wide variety of

disaggregated case record information on the families receiving assistance, families no longer receiving assistance, and families applying for assistance from programs funded under the TANF program. State or Tribal grantee may comply with this requirement by collecting and submitting case record information for its entire caseload or by collecting and submitting the case record information for a portion of the caseload which is obtained through the use of scientifically acceptable sampling methods.

1110 Purpose of the Manual

Sampling is the selection of a part of a whole for the purpose of drawing conclusions about the population, or universe. It permits the administrator to cut costs; reduce manpower requirements; gather vital information more quickly; obtain data not available otherwise; obtain more comprehensive data; and, in some instances, actually increase statistical accuracy. The manual explains statistical techniques in sufficient detail for careful observance of sound sampling procedures and other basic statistical principles. Theory is included to the extent necessary to provide working rules for application of the more commonly used techniques as well as for recognizing the limitation of such techniques. Because many users of the Manual are not statisticians, mathematical exposition and technical language have been kept to a minimum.

This sampling manual contains the broad framework and procedures to be used by each State or Tribes, that opts to file its TANF Data Report (or Tribal TANF Data Report) based on a sample of its caseload. In developing its more specific sampling plans, States and Tribal grantees have considerable latitude in designing samples that are consistent with the principles described herein. The manual should provide the user with a basic understanding of the TANF program sample requirements and statistically valid sampling methods, which are essential to the successful reporting on the TANF program.

Section 1200 describes common types of sample designs (e.g., simple random sampling and systematic random sampling) and basic statistical concepts, which are applicable in any sample survey setting. It is intended to provide a general background to non-statisticians who use the manual. Section 1300 contains sampling plan requirements: a State or Tribal sampling plan must include a detailed description of the sample frame and the procedures that are to be employed in constructing the sample frame, i.e., the list from which the sample is to be selected. Also, the plan must describe in detail the sample selection procedures for identifying the sample cases (families) for which data are to be reported. For guidance on developing a sampling plan, see Appendix D. Section 1400 contains the sample size requirements, sample selection procedures for systematic random sampling and simple random sampling, and special sampling problems associated with the TANF program. Section 1500 describes procedures to be using in the event an adjustment to the sample size is needed. Section 1600 describes the methodology for calculating the monthly and annual work participation rates. Section

1700 contains general information on basic statistical techniques that can be used for an effective analysis of the TANF program data. States and Tribes should use the sampling plan requirements specified in Sections 1300, 1400, and 1500, along with the outline contained in Appendix D (Page 141), to develop their detailed sampling plans. If they need further assistance to develop sampling plans, they can contact the Administration for Children and Families (ACF) Regional Administrator for assistance.

1200 BASIC STATISTICAL CONCEPTS

Probability sampling is an acceptable alternative to providing 100% counts of the TANF caseload each month. Probability sampling has two properties: (1) every unit in the entire population has a known, non-zero chance (called a probability) of being selected in the sample, and (2) there is an element of "randomness" used to select the particular sample for which data are to be collected. These two principles --measurability and randomness -- distinguish probability samples from haphazard, judgment, or quota samples.

1210 Sampling and Non-Sampling Errors

When a sample is selected through a random procedure, the estimates of a population characteristic from that sample will generally be different from the true value of the population characteristic simply because the estimates are based on a sample. Sampling error is defined as the difference between the value of the characteristic as estimated from the sample and the true population value of the characteristic. Although such errors cannot be avoided, they can be controlled and measured (in probability samples).

Non-sampling errors, on the other hand, are generally not measurable (except by the use of special auxiliary sample checks). Examples of non-sampling errors include: (1) careless errors in coding responses, (2) errors attributable to the imperfect design of measurement tools, e.g., I.Q. tests are only an approximate measure of intelligence, and (3) errors due to inability to obtain relevant information for all sample members, i.e., non-response bias.

The design of any study should be examined carefully in order to determine the presence and impact of such errors.

1220 Common Types of Scientific Sampling Techniques

It is impossible to specify a single sampling procedure that would be best suited to all State agencies for all samples. There are many different ways of selecting scientific (probability) samples from populations with items of equal importance. The simplest and most widely used methods are: simple random sampling, systematic sampling, stratified simple random sampling, and stratified systematic sampling. These four widely used methods are acceptable methods of sampling for the purpose of collecting and reporting

the disaggregated TANF and separate State program - maintenance of error (SSP-MOE) data.

1221 Simple Random Sampling

Simple random sampling is a method of selecting a sample in such a way that each unit of the frame has an equal and independent chance of being included in the sample. For samples of any given size (n) from a population of size N , all possible combinations of n units that could form samples of that size must have the same probability of selection. A table of random numbers (see Appendix A, page 107) or a computer program with a random number generator is generally used to choose the sample units. This method is relatively easy to administer and is responsive to variations in caseload size over the course of the sample period.

1222 Systematic Sampling

Systematic sampling method provides a system or pattern of selection of individual units from a sample frame (which may be a hardcopy list or computer file of all the individual units in the population) at equally spaced intervals (such as every 10th, 140th, 850th, etc., as required to obtain the total of a given sample size) with the starting point within the first interval being determined by random selection.

In using the systematic sampling method, one needs to be aware of a major pitfall that exists when the cases on the sample frame are arranged in some kind of repetitive or cyclical pattern. In such an ordered list, the sample interval might sometimes be the same as the cycle and could, therefore, yield a sample of cases with similar characteristics which may not be typical of the caseload. It is, therefore, important not to use a systematic sample with a listing that is cyclical in nature.

1223 Stratified Random Sampling

Stratified random sampling is random sampling of a population that is divided into a number of sub-populations according to some pre-determined criterion (geographic location, characteristic, etc.). In order to produce estimates with a given precision while minimizing the total sample size required, the population is divided into several homogeneous groups so that the units in the same group are more alike than the units in different groups. Each group is called a "stratum" and the process of dividing the population into groups is referred to as "stratification." The strata do not overlap and together comprise the entire population. Sample cases can be selected independently from each stratum using either systematic sampling, simple random sampling, or an

alternative approved sampling procedure. If the percent of the sub-population selected from each sub-population are equal, i.e., proportional sampling, no weighting is required. The sample is "self-weighting." Otherwise, individual weighting factors for each sub-population must be taken into account before the sub-population sample results can be combined.

There are various purposes for stratification. It may be that information is desired on the strata separately; that more accurate estimates of the population parameters are needed than can be obtained by a non-stratified sample; or that costs and administrative constraints must be considered. To achieve these purposes, optimum allocation of the sample size among the strata is usually required. Because a disproportionate number of cases can be drawn from particular strata, some strata may be sampled more intensively than others. For example, a State may find it administratively efficient to give a higher probability of being sampled to urban areas than to rural areas.

The following points should be considered in using the stratified sampling method:

5. Stratified sampling requires advance knowledge of the proportion of the population in each stratum;
6. Stratification by one characteristic does not ensure an efficient stratification by other characteristics that may be of interest;
7. Gains in precision for population estimates will be negligible unless it is known that there are substantial differences among the strata and relatively small differences within each stratum;
8. The cost and effort of creating the strata may outweigh the potential gains in precision;
9. The weighting procedures required for calculating population estimates and confidence levels for stratified samples in which the strata units are disproportionately allocated can be complex and time consuming (see Section 1232.2 (page 14); and
10. Over stratification (i.e., creating too many strata) for a given size of sample can result in some small strata that may adversely affect the precision of estimates.

1224 Allocation of Stratified Sample

If a State selects a stratified sample, the State must decide how to allocate the sample among the strata and describe the allocation procedures in the sampling plan. Two common methods for sample allocation are allocation proportional to stratum caseload size and optimal allocation with respect to an important program characteristic (e.g., participation rate).

1224.1 Proportional Allocation

Proportional allocation means that the size of the samples from the different strata are proportional to the size of the caseload for the strata. In general, this allocation method is desirable because it produces a self-weighting sample. For proportional allocation calculate the stratum sample size by multiplying the total sample size by the ratio of the stratum's caseload to the total caseload.

$$n_h = n \left(\frac{N_h}{N} \right)$$

1224.2 Optimal Allocation

Optimal allocation of a given size sample means that the sizes of the samples from the different strata are determined so that the overall variance is minimized. This is done by taking into consideration several characteristics, e.g., caseload size as well as the estimated standard error for the value of the program characteristic of interest to the program administrator. Because strata differ in both caseload size and the program characteristic, it is reasonable to take larger samples from the strata with greater value of the program characteristic of interest and smaller samples from the strata with less value of the program characteristic of interest. Optimal allocation with respect to the program characteristic produces a disproportionate stratified sample that minimizes the estimated standard error of the program characteristic. Because the sample is disproportionately allocated, the sample results will have to be weighted to generate State program characteristics. The equation for the optimal allocation of a sample is:

$$n_h = n \left(\frac{N_h S_h}{\sum_{h=1}^H (N_h S_h)} \right)$$

where:

n_h is the sample size for the h^{th} stratum;

$n = n_1 \% n_2 \% \dots \% n_h$ is the total State sample size;

$h = 1, 2, \dots, H$ represents the H strata, in which the State's caseload is grouped for sampling;

S_h is the estimated standard error of program characteristic for the h^{th} stratum; and

N_h is the TANF caseload for the h^{th} stratum.

1230 Validity and Reliability of Statistical Data

Sampling and statistical procedures, by themselves, cannot assure validity (or freedom from bias) of the collected data -- that is, that case record information is actually correct and is reported correctly. The validity of the statistical data depends upon the adequacy of the coding schedule in relation to the scope, detail, and significance of the data collected; the accuracy and completeness of the data in the case record; and the degree to which case record reviews are carried out effectively.

Sound sampling procedures can assure a known degree of reliability (also referred to as precision) of statistical data. If sampling procedures are soundly based, the results obtained from one sample taken from the total caseload will be the approximate results obtained if the whole caseload was reviewed.

The TANF sample is designed so that the reliability of the sample results is measurable and can be shown to be relatively high. These results can be made more reliable through proper application of statistical methods, as well as through an increase in sample size.

Because of their importance, examples of sources of bias (which affect validity) and explanations of the formulas involved in measuring precision (reliability) are discussed in some detail.

1231 Bias

A biased sample is one that does not represent the population from which it was selected, i.e., an infinite number of selected samples would not yield the characteristics of the

population from which they were selected. For example, suppose that an opinion survey was conducted in the middle of the day by interviewing everyone on a busy street willing to stop for ten minutes for the interview. If 90 percent of those persons interviewed had a favorable opinion on the issue involved, it would not necessarily follow that about 90 percent of the city residents have a favorable opinion. People on a particular street at a particular time of day would more than likely be unrepresentative of the total city population. Also, the fact that the sample consisted only of individuals who could spare ten minutes in the middle of the day makes the sample even more unrepresentative. Such a sample could contain bias.

One source of bias deals with cases for which data cannot be collected. "Data not collected" or non-response cases fall into several categories. Such cases should have been included in the sample but could not be for reasons such as the case record could not be located or contains incomplete information.

If the number of non-response cases is small, the bias resulting from their non-response will generally also be small. If the number of such cases is large, a considerable bias may be introduced. In effect, a segment of the total caseload is unrepresented if the sample cases for that segment are not reviewed. If a substantial number of sample cases are not included, there is no assurance that conclusions drawn from the sample apply to the total caseload. The number of such cases can be anticipated and should be compensated for by oversampling. Even if the correct number of cases is compensated by oversampling, non-response bias may still be present.

1232 Precision -- Computation of the Confidence Interval

Population values, which can normally be estimated from a sample, are often referred to as population "parameters." A single valued estimate of a population parameter is called a "point estimate." In order to predict the actual proportion of the population with a given caseload characteristic (i.e. the proportion of the caseload with an adult participating in a work program) with any degree of certainty, a range of possible values (confidence interval) is computed. The first step is to compute the "variance" (also called the "mean square deviation") of the point estimate. Variance is the quantity that is used to measure the extent of fluctuations around the mean (simple average) while mean square deviation is used to measure the dispersion around the mean or some arbitrary origin.

For systematic samples, when simulating simple random selection, the estimated variance of a proportion is computed approximately by the following equation ^{1/}:

$$V_p = \frac{p(1-p)}{n} \times \frac{N-n}{N}$$

where:

p = estimated proportion (for item being estimated) in the sample, and

n = sample size

The precision of a sample estimate is measured by the standard error of the estimate, S_p , which is the square root of the variance. The standard error, like the variance, is normally unknown, and can be estimated from the sample.

$$S_p = \sqrt{V_p} \quad \text{or} \quad \sqrt{\frac{p(1-p)}{n} \times \frac{N-n}{N}}$$

If n is small relative to N , then $(N - n)/N$ can be ignored.

The precision specification consists of two elements. First, the administrative decision on the desired degree of reliability determines the sample size necessary to meet the specified probability level and precision range. For example, the administrator might specify that the estimate of the proportion of two-parent families in the caseload is to be within 1 percentage point of the figure that would be obtained by a complete review of the entire caseload. This is called the tolerance specification or limit.

Secondly, since the administrator is dealing with a sample, a certain degree of risk is also assumed. Thus, in the example given above, if the sampling error had been computed so that the estimate plus or minus 1 percent would include the true value in 95 out of 100 samples selected from the same population, the estimate plus or minus 1 percent would be called the 95 percent confidence interval.

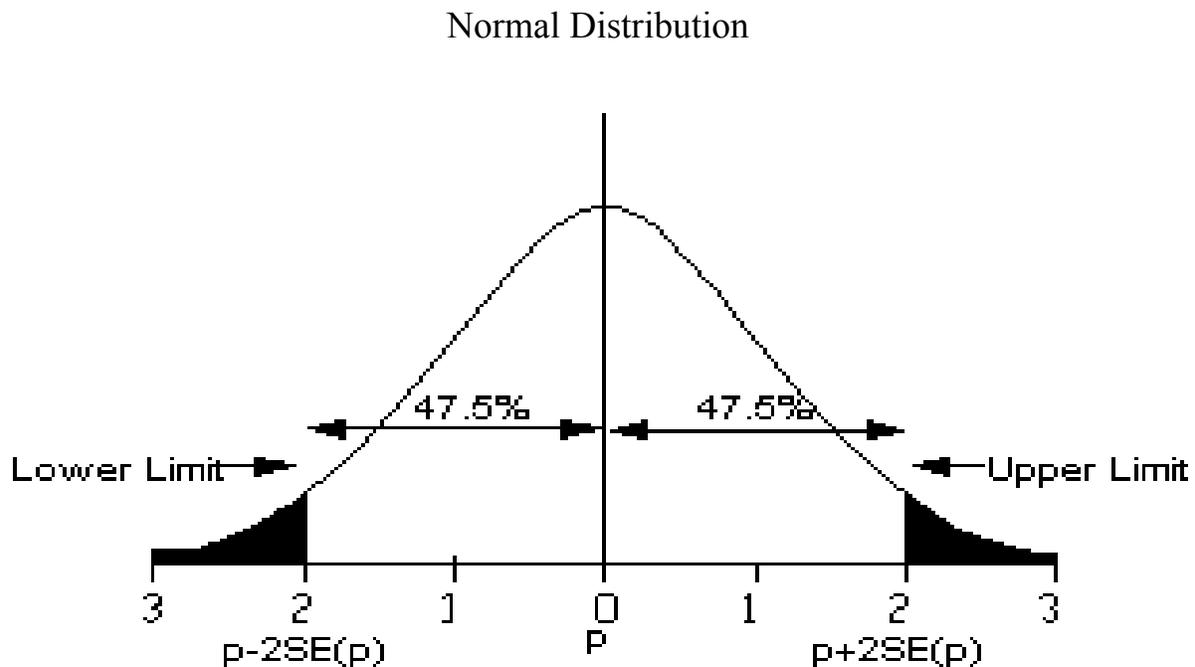
^{1/} It can be shown that, if the units are randomly ordered, the variance of a systematic sample is equivalent to the variance of a simple random sample.

In general, the 95 percent confidence interval is equal to the point estimate plus or minus 1.96 times the standard error of the normal distribution (or its approximation) and is expressed as follows:

$$95\% \text{ CI } = p \pm 1.96 S_p$$

This confidence interval will cover the true value of "p" about 95 percent of the time when sampling repetitively. Expressed in another way, we can be reasonably confident that about 95 percent of the sample proportions will be within 1.96 standard errors of their corresponding population proportion. A visual representation of this statement is shown in the following figure. (The standard normal deviate, 1.96, is associated with the exact 95 percent confidence interval. In practice, however, 2 is sometimes conveniently used to replace 1.96 for constructing a 95 percent confidence interval. The actual probability is 95.46 percent if 2, instead of 1.96, is used.)

Figure 1.



If "p" is the sample proportion, then there is a 95 percent probability that the population value lies between $p + 2S_p$ and $p - 2S_p$. Thus, the population value is within 2 standard errors. (If 99.7 percent confidence was desired, the appropriate

universe value would be within 3 standard errors.) This is called two-tailed probability and is used when interest is in both the upper and lower limits of an estimate.

If however, only one limit is of interest, a one-tailed limit can be used. The standard error (SE) units and probabilities are different for one-tailed limits. The 95 percent confidence interval for the one-tailed lower limit is $p - 1.65 S_p$. If p represents the sample estimate of the participation rate, there is a 95 percent probability that the true participation rate is greater than $p - 1.65 S_p$. Similarly, the 95 percent confidence interval for the one-tailed upper limit is $p + 1.65 S_p$. There is a 95 percent probability that the true participation rate is less than $p + 1.65 S_p$.

1232.1 Computation of Sample Size to Obtain a Desired Precision

By algebraic rearrangement, it is possible to compute the minimum sample size needed to obtain a desired precision. For example, to obtain the sample size required for 95 percent confidence, that a sample proportion " p " will be within plus or minus 2 percent of the true proportion " P " when " p " is assumed to be 50 percent. The computation is as follows:

$$e = 1.96 \sqrt{\frac{p(1 \& p)}{n}}$$

$$\text{or } n = \frac{(1.96)^2 p(1 \& p)}{e^2}$$

where " e " is the desired precision level (2 percent in this example).

Substituting:

$$n = \frac{(1.96)^2 (.50) (1 \& .50)}{(.02)^2}$$

$$n = 2,401 \text{ or approximately } 2,400 \text{ cases}^2$$

It should be noted that, for a proportion, precision is primarily a function of sample size. Larger samples will generally yield more precise estimates. In many cases, the size of the population from which the sample is drawn is not important. As the population size increases, and the ratio $(N \& n)/N$ approaches 1.00 (where "N" is the population size and "n" is the sample size), the effect of population size on precision diminishes and can usually be disregarded.

The specification of precision and confidence are both administrative decisions that are generally the responsibility of those who will use the data. The uncertainty associated with sampling can be reduced by taking larger samples or using superior measurement techniques, but only at some expense. Therefore, these decisions also must take account of the resources available to collect the sample data.

1232.2 Computation of Levels of Precision for Stratified Samples From State (Tribal) Sample

In a stratified sample, population and variance estimates are computed from information in each stratum or group, appropriately weighted and combined.

Precision for Proportions

If in each stratum (h) a systematic sample (approximating a simple random sample) is selected, the equations for estimating the overall proportion (p_s) and its variance are as follows:

2/ The 2,400 figure is based on the assumption that the population rate is 50 percent and that the sample is a small fraction of the caseload so that the finite population factor can be ignored. If the same fraction is large, the finite population factor should be included; the sample size can be modified using the equation

$$n_1 = \frac{n}{1 + (n - 1) / N}$$

where N is the population size.

$$p_s = \sum_{h=1}^H W_h p_h = \sum_{h=1}^H \frac{N_h}{N} p_h$$

and

3

$$V_{p_s} = \sum_{h=1}^H \left(\frac{N_h}{N} \right)^2 \left[\frac{p_h (1 - p_h)}{n_h} \right]$$

where:

H = number of strata;

N_h = population size in stratum h ;

$N = \sum N_h$ = total population size;

$W_h = \frac{N_h}{N}$ = stratum weight;

n_h = sample size in stratum h ;

$n = \sum n_h$ = total sample size of all strata; and

p_h = proportion in stratum h .

The standard error of p_h is estimated by the square root of its estimated variance and, as mentioned earlier, is used in the calculation of confidence intervals. These intervals are calculated in the same manner as for a non-stratified sample.

For example, assume a sample is drawn from three strata. The population sizes in each stratum are 1,000, 2,000, and 4,000; the sample sizes are 50, 200, and 200; and the stratum proportions are .05, 0.1, and 0.2 respectively. The overall proportion is estimated as:

3/ If the finite population factor is included, the equation is given as follows:

$$V_{p_s} = \sum_{h=1}^H \left(\frac{N_h}{N} \right)^2 \left(\frac{N_h - n_h}{N_h - 1} \right) \left(\frac{p_h (1 - p_h)}{n_h} \right)$$

$$P_s = \left[.05 \times \left(\frac{1000}{7000} \right) \right] \% + \left[0.1 \times \left(\frac{2000}{7000} \right) \right] \% + \left[0.2 \times \left(\frac{4000}{7000} \right) \right] = .15$$

and the variance of the proportion is:

$$V_{p_s} = \left[\left(\frac{1000}{7000} \right)^2 \times \frac{(.05)(.95)}{50} \right] \% + \left[\left(\frac{2000}{7000} \right)^2 \times \frac{(0.1)(0.9)}{200} \right] \\ + \left[\left(\frac{4000}{7000} \right)^2 \times \frac{(0.2)(.08)}{200} \right] = 0.00032$$

The standard error of the proportion is:

$$S_{p_s} = \sqrt{V_{p_s}} = \sqrt{.00032} = .018$$

The 95 percent confidence interval of the proportion is:

$$CI = p_s \pm 1.96S_{p_s} = .15 \pm 1.96(.018), \text{ or from } .115 \text{ to } .185$$

1232.3 Relative Efficiency of Stratified Random and Simple Random Sampling

The frequently adopted definition of relative efficiency (E) of an estimator having a variance, for example, of V_1 to another having a variance of V_2 is:

$$E = V_2 / V_1$$

Thus, the smaller the variance of an estimator, the more efficient the estimator. If a State proposes to change its sample design, e.g., from a systematic sample to a stratified random sample, it should check to see if the estimator (for a variety of characteristics being measured) based on the new sample design has a variance that is equal or smaller than that of the present sample design.

1300 SAMPLING PLAN REQUIREMENTS

The sampling plan serves as the foundation for the Administration for Children and Families (ACF) review of the integrity of the State agency's and Tribal grantee's TANF sampling procedures and SSP-MOE sampling procedures. The State or Tribe that elects to submit case record information for a sample of families (also known as, cases) must select its TANF sample (and, if applicable, SSP-MOE sample) for data reporting purposes under a sampling plan approved by the ACF Regional Administrator. All sampling procedures used by the State agency or Tribal grantee, including frame composition and construction, must be fully documented and available for review by the ACF Regional Office. This requirement includes all data processing specifications and automated routines used to select the samples.

The sampling plan documentation must describe the list(s) of families from which the samples are selected, the sample selection procedures, and the methodology for estimating caseload characteristics and sampling errors. Referencing sub-sections of this manual in the sampling plan does not constitute acceptable compliance with the requirements set forth for sampling plan documentation without further explication of the specific procedures the State or the Tribe will use. Detailed descriptions of the sample frames, sample selection, and estimation procedures used by the State or Tribe must be included in the sampling plan documentation.

If a State or Tribe opts to report the required case record information for a sample of families (as opposed to for the entire caseload), a State shall have an approved sampling plan in effect for a full sample period. A State or Tribe may not implement a new sample design without prior approval. A revised sampling plan must be submitted to the ACF Regional Administrator with specific documentation of any substantive modification of a previously approved sample design at least 60 days before the start of the annual sample period, i.e., no later than August 1. The State is not required to resubmit the sampling plan if it is unchanged from the previous year. Changes in random start numbers, sample intervals, or caseload estimates are not to be submitted as a revision of the sampling plan. They should, however, be sent to the ACF Regional Office.

1310 Criteria for Plan Approval

The sampling plan must meet the following criteria:

11. Conformance to principles of probability sampling, i.e., each case (family) in the population must have a known, non-zero probability of selection and computational methods of estimation must lead to a unique estimate;
12. Documentation of methods for constructing and maintaining the sample frame(s), including assessment of frame completeness and any potential problems associated with using the sample frame(s);
13. Documentation of methods for selecting the sample cases from the sample frame(s); and
14. Documentation of methods for estimating case characteristics and their sampling errors, including the computation of weights, where appropriate.

1320 Sample Frame

Samples are selected from a list of families called a "sample frame." The sampling plan must describe in detail the master file, the payroll file, or other list(s) from which the sample of families is actually selected. The plan must explicitly describe the following sample frame characteristics:

1. Date(s) when the sample cases (both regular and supplemental, if applicable) for the sample month are selected, e.g., first workday of the month following the sample month);
2. Source, components, accuracy, and completeness of the sample frame in relation to the total caseload; if not accurate or complete, explanation of why not and how State (Tribe) plans to correct for the problems with the sample frame;
3. Procedures for ensuring that the sample frame contains complete coverage of the applicable caseload (e.g., the active TANF sample frame includes all families receiving assistance under the State's or Tribe's TANF Program, including all newly approved applicants for the sample month, and the closed TANF sample frame includes all families no longer receiving assistance under the State's TANF Program, i.e., assistance terminated effective for the sample month);
4. Whether or not the frame is constructed by combining more than one list (if more than one list, explanation of how lists are identified and how duplication of cases on lists are prevented);

5. Whether the frame is compiled entirely in the State office, entirely in local offices, in the State office based on information supplied by local offices, etc.;
6. Form of the frame, e.g., a computer file, microfilm, or hard copy; if parts of the frame are in different forms, specifications for each part;
7. Frequency and length of delays and method used in updating the frame or its sources;
8. Procedures for estimating the proportion of sample cases for which the State (Tribe) will not be able to collect and report case record information (e.g., dropped as "listed-in-error" because the family (case) did not receive TANF assistance for the reporting month);
9. Methods of locating and deleting "listed-in-error" cases from the frame;
10. Structure of the frame, i.e., the order of cases within each list and the data elements on the frame, including definitions of coded values;
11. Treatment of special populations under TANF (e.g., individuals under a tribal family assistance plan, a non-custodial parent who participates in work activities); and
12. Criteria for stratifying sample (if applicable).

1330 Sample Selection Procedures

The sampling plan must describe in detail the procedures for selecting the sample cases. The plan must explicitly describe the following characteristics:

1. Procedures for estimation of caseload size, if applicable to sampling method;
2. Procedures for determination of an appropriate allowance for sample cases for which the review may not be complete because the sample case was "listed-in-error" (e.g., family did not receive TANF assistance for the sample month);
3. Procedures for determining the required monthly sample size and indication of the sample size;

4. If stratified sample design is used, procedures for sample allocation;
5. Procedures for the computation of sample intervals and the determination of random starts if the State (Tribe) used systematic sampling or stratified systematic sampling;
6. Application of selection procedures to identify sample cases;
7. Procedures to compensate for excessive oversampling or undersampling;
and
8. Time schedule for each step in the sampling procedure.

1400 SAMPLE SIZES AND PROCEDURES FOR SELECTING SAMPLE CASES

1410 Annual Sample Size Requirements

State agencies and Tribal grantees should consider their own management information needs relative to desired reliability of characteristic data broken out for specific groupings, geographic areas, or by monthly or quarterly time periods in deriving the TANF and the SSP-MOE sample sizes. While this section of the manual specifies the minimum required annual sample sizes, States and Tribes are encouraged to select larger size samples in order to increase the precision of the resulting estimates and to meet their own information needs.

For TANF data collection and reporting purposes, there are two sampling frames from which cases are to be sampled. The sampling frames are for families receiving assistance (i.e., active cases, including all newly approved applicants) and families no longer receiving assistance (i.e., closed cases).

If a State has one or more SSP-MOE, it must collect and report a limited amount of data on TANF families receiving assistance, as defined in Appendix B (page 119) and no longer receiving assistance under the SSP-MOEs if it wishes to: receive a high performance bonus or qualify for work participation caseload reduction credit (see section 261.40 through 261.44 of the final rule). The SSP-MOE data reporting requirements are not applicable to Tribes. For the SSP-MOE data collection and reporting purposes, there are two sampling frames from which cases are to be sampled. The sampling frames are for families receiving assistance (i.e., active SSP-MOE cases, including all newly approved applicants) and families no longer receiving assistance (i.e., closed SSP-MOE cases).

1411 Sample Size Requirements for the TANF Active Sample

The minimum required annual sample size for the active TANF sample is 3000 completed cases, of which approximately 2400 are ongoing cases and 600 are newly approved applicants. Of the 2400 ongoing cases, approximately 600 cases are two-parent TANF families. The minimum required sample sizes are designed to provide reasonably precise estimates for such proportions as the work participation rates for all families (e.g., a precision of about plus or minus 2 percentage points at a 95% confidence level) and for

two-parent families (e.g., a precision of about plus or minus 2.3 percentage points at a 95% confidence level), as well as for demographic and case characteristics of newly approved TANF families and all TANF families. In addition, these sample sizes will permit us to detect real changes in certain proportions over time (e.g., changes in the proportion of child-only cases).

The midpoint estimate (from which the confidence limits are constructed) of the overall and two-parent work participation rates will be used in determining if States have met the statutory requirements. If the State is unwilling to accept the precision levels obtained from the minimum required annual sample sizes for the purpose of assessing penalties for failing to meet the work participation rates, it is the State's responsibility to increase its sample size to what the State determines is an acceptable level of precision for this purpose.

To meet these sample size requirements, States and Tribes may select one of the following options:

9. Use a simple or systematic sampling methodology (or other acceptable method) and use an overall sample size that is sufficiently large enough to obtain the 600 cases needed to meet the two-parent family required sample size, the 600 required to meet the newly approved application sample size, and the 3000 cases required to meet the overall sample size.
10. Stratify the sample by newly approved applications; two-parent families; and all other families. Use a random sampling method within each stratum to select the sample. Taking into consideration the fact that two-parent families are included in the calculation of the all family work participation rate, compute the sample size for each stratum based on the 600-case requirement for the two-parent stratum and 600 for the newly approved applications stratum, and 1800 cases for the remaining families.

Under option 2, each stratum is sampled separately, and the monthly all families work participation rate is a weighted rate, reflecting the representation of two-parent families and other families with at least one adult or a minor child head-of-household to the total all family population. If a State or Tribe uses a stratified sample design, the State (or Tribe) must submit the monthly caseload for each stratum. These monthly caseload sizes by stratum are due 45 days after the close of each quarter (i.e., the same due dates as for the quarterly TANF Data Report).

If a State or Tribe does not have enough newly approved applicants or two-parent families to meet the required annual sample sizes of 600 families (i.e., the average monthly sample size of approximately 50 newly approved applicant families or 50 two-parent families), the State or Tribe must select 100% of such families and select from the

other ongoing stratum enough additional cases to meet the overall required annual sample size of 3000 families. If a State or Tribe does not have enough families to meet the overall sample requirement (i.e., 3000 families for the active TANF sample for an average monthly sample of 250 families), the State or Tribe must report on 100% of their families each month.

States and Tribes are not limited to these two methods for meeting the sample size requirements. However, alternative methods should be discussed with Regional statistical staff to ensure the reliability of the work participation rates and any other statistic used to award a bonus or assess a penalty is not severely affected.

1412 Sample Size Requirements for the TANF Sample of Closed Cases

The minimum required annual sample size for the sample of closed cases is 800 cases. An 800-case sample will permit us to obtain a precision of plus or minus 3.5 percentage points for an attribute of 0.50 at a 95% confidence level. This result is obtained from the formula in Section 1232.1 of this manual.

If a State or Tribe does not have enough closed cases to meet the required minimum annual sample size of 800 families (i.e., an average monthly sample size of approximately 67 families), the State or Tribe must collect data for and report on 100% of the closed cases.

1413 Sample Size Requirements for the SSP-MOE Active Sample

The minimum required annual sample size for the active SSP-MOE sample is 3000 cases, of which approximately 2400 are ongoing cases and 600 are newly approved applicants. Of the 2400 ongoing SSP-MOE cases approximately 600 cases are two-parent families. The minimum required annual sample sizes are designed to provide reasonably precise estimates for such proportions as the work participation rates for all families (e.g., a precision of about plus or minus 2 percentage points at a 95% confidence level) and for two-parent families (e.g., a precision of about plus or minus 2.3 percentage points at a 95% confidence level), as well as for demographic and case characteristics of State SSP-MOE families. In addition, these sample sizes will permit us to detect real changes in certain proportions over time (e.g., changes in the proportion of child-only cases).

If a State does not have enough newly approved applicants or two-parent families to meet the required annual sample size of 600 newly approved applicant families and 600 two-parent families (i.e., the average monthly sample size of approximately 50 newly approved applicant families and 50 two-parent families respectively), the State must select 100% of such families and select from the other ongoing stratum enough additional

cases to meet the overall required annual sample size of 3000 families. If a State does not have enough families to meet the overall sample requirement (i.e., 3000 families for the active SSP-MOE sample for an average monthly sample of 250 families), the State must collect data for and report on 100% of its families.

1414 Sample Size Requirements for the SSP-MOE Sample of Closed Cases

The minimum required annual sample size for the SSP-MOE sample of closed cases is 800 cases. An 800-case sample will permit us to obtain a precision of plus or minus 3.5 percentage points for an attribute of 0.50 at a 95% confidence level. This result is obtained from the formula in Section 1232.1 of this manual.

If a State does not have enough closed cases to meet the required annual SSP-MOE sample size of 800 families (i.e., an average monthly sample size of approximately 67 families), the State must collect data for and report on 100% of the closed cases.

1415 Adjustment to the Sample Size for States and Tribes with Small Caseloads

If a State or Tribe has a small average monthly caseload, it may use the following procedures in applying the finite correction factor to adjust the minimum annual sample size. The formula for obtaining an adjusted sample size using the finite correction factor is:

$$n_1 = \frac{n}{1 + (n - 1) / N}$$

where N = Total number of case months for the annual sample period (i.e., the average monthly caseload times twelve months)

n = minimum required annual sample (e.g., active case sample is 3000 cases and closed case sample is 800 cases)

1. Compute the estimated number of case months for the annual reporting period.

For example, if a State or Tribe has an estimated average monthly active TANF caseload of 1,000 cases, then the total number of case months is 12,000 case months (i.e., $N = 1,000$ cases per month times 12 months = 12,000 case months).

2. Use the above formula and round up to determine the adjusted overall sample size requirement.

For our example, the adjusted overall minimum required active TANF sample size would be:

$$n_1 = \frac{3000}{1 \% (3000 \& 1) / 12000} = 2400$$

3. In computing the adjusted minimum annual sample size for the State's or Tribe's active TANF sample or the active State SSP-MOE sample, prorate the overall adjusted sample size to determine the required number of two parent families, the required number of newly approved applicants and the required number of other ongoing cases.

For our example, the sample size requirement for two-parent families is 480 cases (i.e., 600 times 2400 divided by 3000), for newly approved applicant families is 480 (i.e., 600 times 2400 divided by 3000) and for other ongoing cases is 1440 cases (i.e., 1800 times 2400 divided by 3000).

1416 Average Monthly Sample Size

A State agency or Tribal grantee must select approximately one-twelfth of its annual sample size each sample month. The average monthly sample size is determined by dividing the required annual sample size by 12 and rounding the result up to the nearest whole number. For the active TANF sample and SSP sample, the average monthly sample sizes are 250 cases, of which 50 are two-parent families, 50 are newly approved applicants, and 150 are other ongoing cases. For TANF and SSP samples of closed cases, the average monthly sample sizes are about 67 cases. The following additional procedures apply to the TANF samples and to the State's SSP samples:

1. State agencies and Tribal grantees should select additional cases (use the rate for "listed-in-error" cases based on historical data or, if unknown, use five percent) of each sample to compensate for cases that may be reported as "listed-in-error";
2. A State or Tribe may increase its sample size above the minimum (and we encourage them to do so), but may not reduce its sample size below the minimum; and
3. A State or Tribe has the option of collecting and reporting data for the entire TANF population and a State has the option of collecting and

reporting data for its entire SSP population. However, we encourage States and Tribes to take advantage of their option to use sampling, when appropriate. Sufficiently large samples can produce reasonably precise estimates, while saving substantial administrative staff resources and funds.

1420 Sample Frame

Creating a frame or list of cases from which the monthly samples are to be selected and determining the sample size are preliminary steps applicable to any probability sample design. Careful study of the structure of the sample frame is always essential in probability sampling, especially in systematic sampling. The choice of a frame depends upon the criteria of timeliness, completeness, and administrative burden. The structure of the sample frame should provide for an unduplicated list of cases comprising the target population or otherwise allow for all units to have a known, non-zero chance of selection into the sample. In systematic sampling, cases should be randomly ordered with respect to the variables being measured, e.g., case characteristics data, earnings, participation in work activities, etc. This random order is usually achieved if cases are arranged by case number or by county and then alphabetically within county, or by any other file organization that is not directly related to the measurement of critical variables. The structure of the sampling frame must be fully documented in the sampling plan and may not be changed without an approved revision of the sampling plan.

1421 Sampling Frame for the TANF Active Case Sample

The monthly TANF sample frame consists of all families who receive assistance under the State (Tribal) TANF Program for the sample month by the end of the sample month. The term "assistance", defined in §260.31 of the final rule, includes cash, payments, vouchers, and other forms of benefits designed to meet a family's ongoing basic needs (i.e., for food, clothing, shelter, utilities, household goods, personal care items, and general incidental expenses). It includes such benefits even when they are provided in the form of payments by a TANF agency, or other agency on its behalf, to individual recipients and conditioned on their participation in work experience, community service, or other work activities (i.e., under §261.30).

Except where excluded as indicated in the following paragraph, it also includes supportive services such as transportation and child care provided to families who are not employed.

The term "assistance" excludes:

1. Nonrecurrent, short-term benefits (such as payments for rent deposits or appliance repairs) that:
 - a. Are designed to deal with a specific crisis situation or episode of need;
 - b. Are not intended to meet recurrent or ongoing needs; and
 - c. Will not extend beyond four months.
2. Work subsidies (i.e., payments to employers or third parties to help cover the costs of employee wages, benefits, supervision, and training);
3. Supportive services such as child care and transportation provided to families who are employed;
4. Refundable earned income tax credits;
5. Contributions to, and distributions from, Individual Development Accounts;
6. Services such as counseling, case management, peer support, child care information and referral, transitional services, job retention, job advancement, and other employment-related services that do not provide basic income support; and

7. Transportation benefits provided under an Access to Jobs or Reverse Commute project, pursuant to section 404(k) of the Act, to an individual who is not otherwise receiving assistance.

The exclusion of nonrecurrent, short-term benefits under (1) of this paragraph also covers supportive services for recently employed families, for temporary periods of unemployment, in order to enable continuity in their service arrangements.

The TANF active case sample frame could be a master file; a payroll file; an eligibility, activity, or other caseload file; or a combination of such files depending on how the State or Tribe defines its range of benefits/assistance. If such a list cannot be constructed based on the above definition of the sampling universe, it may be necessary to use a special procedure to ensure that all families receiving assistance have a known, non-zero chance of being included in the sample. The sampling plan should contain the State or Tribe's objective criteria for the delivery of assistance and determination of eligibility as set forth in the State or Tribe's family assistance plan. State agencies and Tribal grantees should verify the receipt of assistance for all selected cases, and all such cases discovered not to have received assistance for the reporting month should be reported as "listed-in-error." For all other cases selected into the sample, the data collection must be completed and the data must be submitted to ACF by the specified time frames.

States or Tribes that use regular first-of-the-month payroll or eligibility listings as the frame for selection of sample cases must extend that frame at the end of the report month and continue sampling all cases for which assistance was initiated during the report month that were not on the first-of-the-month payroll/eligibility listing. Care must be taken to ensure that the sample frame consists of unduplicated cases. A distinction is made between cases already receiving TANF and cases in which assistance is initiated during the month. For example, a case receiving a regular payment on October 1 and a supplemental payment on October 12 should only be subject to selection once for the month of October. Procedures for accomplishing this must be specified in the sampling plan. Normally, this will be accomplished by running a computer sort/merge routine at the end of the report month in order to establish the list of supplemental cases to be added to the frame.

States or Tribes that use simple random sampling should form the sample frame at the end of the sample month, ensuring all families that received assistance for the month by the end of the month are on the sample frame. Then the sample is selected after the end of the sample month.

There are a number of family circumstances that merit special attention. These are described below.

1422.1 Newly Approved Applicant (a.k.a., Initial Assistance Cases)

A newly-approved applicant or an "initial payment/assistance" case for a sample month means the family is newly added to the TANF caseload and the current reporting month is the first month in which the TANF family receives TANF assistance (and thus has had a chance to be selected into the TANF sample). This may be either the first month that the TANF family has ever received assistance or the first month of a new spell on assistance. The initial payment/assistance case should be included on the sample frame for the initial month in which it received assistance and for all subsequent months for which assistance is issued. For States that provide assistance back to the date of application, these cases may, at State option, be included on the frames for prior months, as assistance was not received by the end of such months.

A family that moves back and forth between receipt of assistance to receipt of only non-assistance in a subsequent month while remaining in the TANF program will be a newly approved applicant each time it moves to receipt of assistance for a reporting month.

1422.2 Non-Custodial Parents

A non-custodial parent is defined in §260.30 as a parent of a minor child who: (1) lives in the State and (2) does not live in the same household as the minor child. The State must report information on the non-custodial parent if the non-custodial parent: (1) is receiving assistance as defined in §260.31; (2) is participating in work activities as defined in section 407(d) of the Act; or (3) has been designated by the State as a member of a family receiving assistance. In reporting non-custodial parents, States or Tribes should not treat the non-custodial parent as a separate case. Rather, when the family unit containing his/her child(ren) is selected into the sample, code the type and amount of assistance received by the non-custodial parent as part of that case. The non-custodial parent's person level data must also be provided. States and Tribes have the option to include or exclude the non-custodial parent from the work participation rate on a case-by-case basis. If an individual is both a custodial parent for a TANF family receiving assistance and a non-custodial parent for another TANF family receiving assistance, the State or Tribe should report the individual only with the family for which (s)he is the custodial parent.

1422.3 Members of Indian Tribes Not Receiving Assistance under a Tribal Family Assistance Plan

The State sample frame must include each member of an Indian tribe otherwise meeting the definition of the sampling unit who is domiciled in the State and is not receiving assistance under a Tribal family assistance plan.

1422.4 Members of Indian Tribes Receiving Assistance under a Tribal Family Assistance Plan

The State should not include members of an Indian tribe receiving assistance under a Tribal family assistance plan, even if the State selected the option to include such families in the calculation of its participation rate as provided for in section 407(b)(4) of the Social Security Act.

1422.5 Cases Selected For More Than One Sample Month

If a family is selected into the sample for more than one month during the annual reporting period, the State or Tribe should collect data for and report on the family for each month for which it is selected.

1422.6 Cases Receiving Assistance Under the State's TANF Program and Separate State Programs for the Same Month

A TANF eligible family may receive some form of assistance under both the State's TANF Program and its SSP during the reporting month. If this occurs, the family should be included on the active sample frame for both the TANF and the SSP. If such a family is selected into the sample, the State should collect data for and report on the family for each program for which it was selected.

1422.7 Cases With a Child Not Living With a Parent or Adult Caretaker Relative

Many activities are covered under section 401(a) of the Social Security Act (Act) (the purposes of the TANF program). However, some activities are not permissible under the purposes of the TANF program, but had been included in a State's approved AFDC plan, JOBS plan, or Supportive Services plan as of 9/30/95, or at State option, 8/21/96. Section 404(a)(2) "grandfathers in" States whose prior programs had such expenditures. Thus, this section allows States to use Federal TANF funds for specific activities that had been previously authorized based on an approved plan, using the same financial eligibility criteria contained in the approved prior plan. Examples of such activities are juvenile justice and foster care activities that were included in some States' approved plan.

The legislative history makes it clear that the State may elect to continue to provide the service or benefit under section 404(a)(2) of the Act, notwithstanding the prohibitions in section 408 of the Act. For example, if a State's approved AFDC plan enabled it to provide "assistance" or services to children in the juvenile justice system that does not constitute TANF "assistance", then it may continue to use TANF funds for such activities even though the child is not living with his parent or other adult caretaker relative. Nonetheless, if the child is receiving "assistance" funded under the State TANF program, the child is a child-only family for data collection and reporting purposes. For a State that reports on its entire caseload, the State must collect data on and report data for all such child-only families for each month that the families receive assistance. For the State that reports its data for a sample of families, the State must include all such child-only families on its monthly sample frame for each month that the family receives assistance. If the child-only family is selected in a monthly sample, the State must collect data for and report data on the child-only family for that month.

1423 Sample Frame for the Sample of Closed TANF Cases

For closed cases, the monthly TANF sample frame must consist of all families whose assistance under the State TANF Program was terminated for the reporting month (do not include families whose assistance was temporarily suspended), but received assistance under the State's TANF Program in the prior month. A family that moves from receipt of assistance under the TANF program for a month to receipt of benefits that are not assistance under the TANF program for the subsequent month is a closed case for reporting purposes. Also, a TANF eligible family that is transferred to the State's SSP or Tribal TANF program is usually closed for the State TANF Program.

1424 Sample Frame for the Sample of Active SSP Cases

The monthly active SSP sample frame must consist of all families who receive assistance under the separate State programs for the reporting month by the end of the reporting month. The term "assistance" for separate State programs has the same meaning as for TANF Programs. See Section 1421 (page 27) for the definition.

1425 Sample Frame for the Sample of Closed SSP Cases

For closed cases, the monthly SSP sample frame must consist of all families whose "assistance" under the SSP was terminated for the reporting month (do not include families whose assistance was temporarily suspended), but received assistance under the SSP in the prior month. A family that is transferred to a State's TANF Program is usually a closed case for the SSP.

1430 Procedures for Selecting Sample Cases

States and Tribal grantees have flexibility to choose from a wide variety of sampling methods, including systematic sampling, simple random sampling, and stratified (systematic or simple) random sampling. For illustrative purposes, the following procedures are based on the systematic sampling design and, if used, are repeated each month during the annual sample period. In illustrating the procedures, a State or Tribe with an estimated average monthly active TANF caseload of 42,600 is used. These same procedures could be used to select the sample of closed TANF cases or the sample of the active and closed SSP cases. Note, these procedures could be used to select a sample within each stratum for a stratified systematic sample design.

1. Estimate Caseload Size

The TANF average caseload is an estimate of the average monthly number of cases that will receive assistance for the forthcoming annual sample period. The average caseload size should be estimated on the basis of past caseload sizes and trends. Any known circumstances, such as policy changes that would appreciably change caseload sizes, also should be taken into account in making the estimate.

Since the average monthly caseload must be estimated before the beginning of the annual sample period, unanticipated changes can result in the need for adjusting the sample interval. Recognizing the difficulty of forecasting caseloads over a 12-month period, States and Tribes should re-evaluate the estimated caseload before the end of each quarterly reporting period. If the caseload estimate is changed, a new sample interval for the 12-month period and adjustments to the number of sample cases already selected may

be needed. The procedures in Section 1510 (page 42), or 1520 (page 44,) can be used depending on whether the sample requires correction for oversampling or undersampling. If no correction is required for the remaining quarterly reporting period(s), using these procedures will result in a self-weighting annual sample.

2. Determine Sample Size

The minimum required annual sample sizes of completed cases are shown in Section 1410 (page 21). In our illustration, the minimum sample size is used.

$$n = 3,000$$

An estimate of the percent of cases that may possibly be reported as listed-in-error during the TANF data collection process will need to be made in order to arrive at the required completed sample size. For example, assuming that 5 percent of the selected cases will be reported as listed-in-error, the number of cases to be selected can be computed as follows:

$$3,000 \div (1 \& .05) = 3,158$$

3. Establish Frame

As mentioned in Section 1421 (page 27), a listing of all TANF cases that received assistance for the sample month by the end of the month (including initial assistance cases and cases that are reinstated) comprises the frame from which the sample is selected.

4. Establish Average Monthly Sample Size

The average monthly sample size is obtained by dividing the sample size for the sample period by the number of months in the period. In our illustration, the average monthly sample size is $3,158 \div 12$, which is 263.167 cases.

5. Compute Sample Interval

The sample interval is obtained by dividing the estimated average caseload in the annual sample period (Step 1) by the unrounded average monthly sample size (Step 4). In our example, the sample interval is $42,600 \div$

263.167, or 161 (rounded down). This means that each month, data will be collected for 1 out of every 161 TANF cases.

6. Select Random Start Number

The random start number can be as large as the number of cases contained in the sample interval and is used only to determine the first selected sample case for each month's sample. Since the sample interval in our example is 161, we must select a random start number between 001 and 161 (inclusive). Assume the number selected is 103.

7. Select Monthly Sample

The sequential position of the first selected sample case on the frame is the starting point for selection of all subsequent cases. (If the frame is in several parts, it will be desirable to assemble the parts so that one continuous list is created. Every " k^{th} " case will then be selected from a list in which all cases are present.)

It is important in selecting the monthly sample to apply the same sample interval to the entire list of cases each month. This is an important part of the sampling design and should not be violated in order to obtain a specific number of cases each month.

In our illustration, if the sample interval was a whole number, the 103rd case on the list would be selected and every 161st case thereafter, i.e., 103rd, 264th, 425th, etc. In each of the remaining eleven months of the sample period, assuming no adjustment in estimated caseload size is necessary after the sixth month, new random starts would be obtained as the first case of each month and then multiples of 161 added to obtain the other cases for data collection and reporting.

It should be understood that the numbers selected for the sample cases relate to specific cases; substitutions or approximations are not acceptable. For example, only the 103rd case must be selected, not the 102nd, or 104th, etc. Once the random start and sample interval are determined, the specific cases to be selected are identified.

There are several methods of selecting sample cases when the sample interval is not a whole number. In one method, the sample case to be selected is determined by rounding the number obtained after the sample interval is added to the previous sample interval. For example, since in our illustration the sample interval number was actually 161.87 instead of 161,

the following sample cases would be selected from the sample frame of eligible cases (assuming a random start number of 163):

Selected Cases	Selection Procedure
# 103	- random start case
# 265	$\begin{array}{r} 103 \\ + 161.87 \\ \hline 264.87 = 265 \end{array}$ - random start case - interval - rounded
# 427	$\begin{array}{r} 264.87 \\ + 161.87 \\ \hline 426.74 = 427 \end{array}$ - previous total - interval - rounded
# 589	$\begin{array}{r} 426.74 \\ + 161.87 \\ \hline 588.61 = 589 \end{array}$ - previous total - interval - rounded
# 750	$\begin{array}{r} 588.61 \\ + 161.87 \\ \hline 750.48 = 750 \end{array}$ - previous total - interval - rounded
etc.	etc.

For TANF purposes, an acceptable method for selecting sample cases when the sample interval is not a whole number is to round down to the next lower whole number and use that number in selecting the sample cases. For example, using the same sample interval of 161.87 and random start number of 103, the interval would be rounded down to 161 and the sample cases selected would be the 103rd, the 261th, the 425th, the 586th, 747th, etc.

8. Submission of Caseload Size, Sample Interval and Sample Cases Selected

If a State or Tribe opts to use systematic sampling or stratified systematic sampling, the State or Tribe should send the estimated average monthly caseload and the computed sample interval(s) to be used for the 12-month sample period to the ACF Regional Administrator thirty (30) calendar days before the October sample selection.

If a State or Tribe uses a stratified sample design, it must submit the monthly caseload sizes by stratum for each month of the quarter within 45 days after the end of the quarter. These data are needed for weighting purposes.

Regardless of the method used to select the sample cases, each State and Tribe that opts to collect data for and report on a sample of cases must submit the monthly list of selected sample cases (including reserve pool cases, if applicable, under Section 1531 page 47), within 10 days of the date of selection specified in the State or Tribe sampling plan.

1440 Procedures for Selecting Sample Cases Using a Simple Random Sample

States and Tribal grantees may want to use simple random sampling or stratified simple random sampling because there are a number of computer software packages that contain programs that use this method of sampling. For illustrative purposes, the following procedures are based on the simple random sampling design and, if used, are repeated each month during the annual sample period. These same procedures could be used to select the sample of closed TANF cases or the sample of the active and closed SSP cases. Note, these procedures could be used to select a sample within each stratum for a stratified simple random sample design.

1. Establish the Monthly Sample Frame

As mentioned in Section 1421 (page 27), a listing of all TANF cases that received assistance for the sample month by the end of the month (including initial assistance cases and cases that are reinstated) comprises the frame from which the sample is selected.

2. Determine the Number of Families on the Sample Frame

Many automated simple random sampling routines need to know the number of sampling units on the sample frame and the number of units to be selected prior to execution of the sample selection routine. For the

TANF active sample, the sampling units are the families receiving TANF assistance. If a stratified simple random sample is used, the State must determine the number of families in each stratum for the sample month.

3. Determine Sample Size

The minimum required annual sample sizes of completed cases are shown in Section 1410 (page 21). In our illustration, the minimum sample size is used.

$$n = 3,000$$

An estimate of the percent of cases that may possibly be reported as "listed-in-error" during the TANF data collection process will need to be made in order to arrive at the required completed sample size. For example, assuming that 5 percent of the selected cases will be reported as "listed-in-error", the number of cases to be selected can be computed as follows:

$$3,000 \div (1 - .05) = 3,158$$

4. Establish Average Monthly Sample Size

The average monthly sample size is obtained by dividing the sample size for the sample period by the number of months in the period. In our illustration, the average monthly sample size is $3,158 \div 12$, which is 263.167 cases or 263 cases.

5. Select Monthly Sample

The most practical way of selecting a sample of TANF cases using a simple random sample is with the use of automated routines. These routines use a random number generator to select n (the number of units to be selected) out of N (the number of units on the sample frame). The n sample cases should be selected without replacement. To illustrate using a monthly sample frame with 42,600 families and a monthly sample size of 263 sample cases, the automated sampling routine would select 263 numbers between 1 and 42,600 inclusive. If the random numbers generated include 20, 175, 183, 500, etc., then the 20th, 175th, 183rd, and 500th case on the sample frame would be drawn into the sample.

6. Submission of Caseload Size, Sample Interval, and Sample Cases Selected

If a State or Tribe uses a stratified sample design, it must submit the monthly caseload sizes by stratum for each month of the quarter within 45 days after the end of the quarter. These data are needed for weighting purposes. States and Tribes that use non-stratified sample designs report their total monthly caseload numbers on the TANF Data Report - Section Three. These figures are used to weight the State data.

Regardless of the method used to select the sample cases, each State and Tribe that opts to collect data for and report on a sample of cases must submit the monthly list of selected sample cases (including reserve pool cases, if applicable) within 10 days of the date of selection specified in the State or Tribe sampling plan.

1450 Retention of Sampling Records

Each State and Tribe shall retain all sampling records for an annual sample period for a minimum of three years after the end of the sample period. These materials shall include the

1. original monthly sample frames from which the sample was selected;
2. computer programs used to construct the sample frames and select the sample cases;
3. caseload estimate worksheets;
4. sample intervals and random start numbers;
5. sample size;
6. lists of selected cases, including supplemental and reserve pool cases if applicable; and
7. audit trail tracking logs.

In addition, the State and Tribe shall retain the approved sampling plan until a revised plan is approved and implemented. When the revised approved sampling plan is implemented, the previously approved sampling plan should be retained for three years. These materials are to be made available to the Regional staff upon request.

1500 CORRECTION FOR UNDERSAMPLING AND EXCESSIVE OVERSAMPLING

When using systematic sampling, imprecise caseload projections or an unexpected drop rate will result in the State or Tribe not obtaining its target sample size. If the actual universe is larger than the estimated size, oversampling may occur. If the actual universe is smaller than the estimated size, undersampling may occur. A State agency and Tribal grantee must correct for undersampling to the extent necessary to meet sample size requirements for TANF reporting and a State agency must correct for undersampling to the extent necessary to meet sample size requirements for reporting of separate State programs. A State agency or Tribal grantee has the option as to whether or not to correct for excessive oversampling. However, we encourage States and Tribes to select larger than the minimum required annual sample size in order to increase the precision of statistics that are estimated from the sample data.

In correcting the TANF or SSP sample size, care must be taken to assure that the statistical principles of "randomness" and measurability are not violated. The selection of additional families for the TANF and SSP samples or deletion of units from the samples must be done in a manner that assures all cases in the population have a known, non-zero probability of selection into the final sample. In addition, techniques of stratification should not be employed in such a way that small additional strata are created for which computed estimates may be unreliable, resulting in a loss of precision in population estimates.

The procedures that a State (Tribe) uses to correct for excessive oversampling or correct for undersampling will depend partly on the procedures the State (Tribe) used to select its original sample cases. States and Tribes may choose from a wide variety of sampling methods. State agencies or Tribal grantees that select their TANF samples or State agencies that select their SSP samples using the systematic sampling method can use the procedures in Sections 1510, 1520, or 1530 of this manual to adjust sample sizes. State agencies or Tribal grantees that select their TANF samples or State agencies that select their SSP samples using the simple random sampling method can use the procedures in Sections 1540 to adjust sample sizes. For State agencies or Tribal grantees that use another method to select their TANF samples, ACF Regional Office staff will be happy to provide technical guidance on procedures to correct for excessive oversampling or undersampling to ensure that the principles of probability sampling are retained.

Monthly sample sizes should be monitored throughout the reporting period and correction should be made only when it becomes clear that target samples will not be met. It is good practice to re-estimate caseloads at the end of each quarterly reporting period. Waiting to the end of the annual period to make necessary corrections could create difficulties in collecting the information and adversely affect the State's (Tribe's) ability to submit data in a timely manner.

The following procedures allow State agencies and Tribal grantees to make corrections in all months starting with the first month of the reporting period. A consideration for a State in selecting this method is that, in certain circumstances, it may be difficult to obtain accurate information for past months. This method does not involve the creation of additional strata.

1510 Standard Method to Correction for Undersampling or Oversampling when Sample Selected Using Systematic Sampling

1510.1 Correction for Oversampling

8. Using the procedure described in Section 1430, Step 1 (page 32), re-estimate the caseload size, adding on the expected number of cases to be dropped as listed-in-error, and compute a revised sample interval.

For each month in which the sample cases have already been selected:

9. Divide the size of the monthly sample frame by the revised sample interval (Step 1) to obtain the revised estimate of the number of sample cases that should have been selected.
10. Subtract the number of cases obtained in Step 2 from the number of sample cases that have been selected. This is the number of sample cases to be eliminated.
11. Divide the number of sample cases that have been selected by the number of cases to be eliminated (Step 3) to obtain the secondary sample interval to be used in identifying the cases to be eliminated.
12. Use a random start and apply the secondary sample interval obtained in Step 4 to select cases from the list of sample cases already selected. The cases so identified are to be eliminated regardless of whether or not data had already been collected.

For months in the annual period for which sample cases have not yet been selected:

13. Use the corrected sample interval for the period obtained in Step 1 to select sample cases from the monthly frames.

1510.2 Correcting for Undersampling

1. Using the procedure described in Section 1430, Step 1, (page 32) re-estimate the caseload size, adding on the expected number of cases to be dropped as listed-in-error, and compute a revised sample interval.

For each month in which the sample cases have already been selected:

2. Divide the size of the monthly sample frame by the revised sample interval (Step 1) to obtain the revised estimate of the number of sample cases that should have been selected.
3. Subtract the number of sample cases already selected from the number obtained in Step 2. This is the number of additional sample cases to be selected from the monthly frame.
4. Divide the total monthly sample frame size by the number identified in Step 3 to obtain the secondary sample interval to be used in selecting additional cases from the monthly sample frame.
5. Use a random start and apply the secondary sample interval obtained in Step 4 to the monthly sample frame from which cases have already been selected. (If correction for undersampling is required only for the third and/or fourth quarters of the annual period, the State has the option of applying the secondary interval either to the first month of the sample period (October) or the first month of the applicable quarter (April or July)). Add the specific cases identified to the cases already selected for the same month as the month of the sample frame from which they were selected. If a case previously selected in the sample is again selected and identified for the same month as previously selected, an alternate case is to be selected by using a table of random numbers.

For months in the annual period for which sample cases have not yet been selected:

6. Use the corrected sample interval for the period obtained in Step 1 to select sample cases from the monthly frames.

1520 Alternate Method of Correcting for Undersampling or Oversampling When Sample Selected Using Systematic Sampling

An alternate method involves no adjustment for the months for which cases were already selected, however it does result in stratification of the sample by time. The alternative method entails the computation of a new sample interval that will either (1) undersample the remaining months of the 12-month sample period to meet sample size requirements if the earlier months had been oversampled, or (2) oversample the remaining months of the annual period to meet sample size requirements if the earlier months had been undersampled.

Because two different sample intervals will have been used, results of cases selected by each sample interval cannot be directly added to obtain State-wide (Tribal-wide) estimates as the proportions of the monthly frames sampled are different, i.e., the total sample is not a self-weighting sample.⁴ The alternate method will require all data to be weighted at the end of the 12-month period. The procedure involves inflating the various frequencies (e.g., number of families with an adult working, the number of families with a minor parent head of household, cases with earned income, etc.) in cases obtained using each sample interval, to their representation in the caseload and dividing the result by the caseload.⁵ This gives the weighted rate for the State (Tribe). In order to make each of the frequencies (number of families with an adults working, the number of families with a minor parent head of household, etc.) comparable with those of other States (Tribes), it is necessary to multiply the weighted rate by the total sample size. The equation for this procedure is as follows:

-
- 4/ It should be noted that a self-weighting sample, except for rounding, must possess the following characteristic:

$$\frac{\text{Sample cases selected in a specific month}}{\text{Total sample cases selected in sample period}} = \frac{\text{Cases in sample frame for same month}}{\text{Total cases in all sample frames in sample period}}$$

- 5/ "Caseload", for the purpose, is defined as the completed sample size multiplied by the sample interval.

$$\text{Weighted State Rate} = \frac{\sum (x_m)(SI_m)}{\sum (n_m)(SI_m)}$$

where:

- j = the sum of . . . all strata ("stratum" is defined as part of the annual period using the same sample interval);
- m = the m^{th} stratum (m is the stratum index);
- x_m = "characteristic of interest" in the m^{th} stratum;
- n_m = completed sample size in the m^{th} stratum; and
- SI_m = sample interval used in the m^{th} stratum.

For example, assume that a State originally had estimated that its caseload would average 80,000 cases for the annual sample period. Assuming a 5 percent drop rate, the State used a sample interval of 303. Actual experience after 10 months resulted in the State revising its average caseload to 75,000, making no change in its drop rate. If the State made no corrections, the final completed sample size for the period would be short approximately 188 cases.

Assume that the State decides to obtain the additional 188 cases by using a revised sample interval of 219 for the last 2 months of the sample period. Also assume for the first 10 months of the sample period ($m = 1$) that the --

Number of cases completed (n_1) = 2,350

Number of cases with "characteristic of interest" (x_1) = 112

and for the last 2 months of the sample period ($m = 2$) that the --

Number of cases completed (n_2) = 650

Number of cases with "characteristic of interest" (x_2) = 37

Using the definition of "caseload" as defined earlier, i.e., sample cases completed multiplied by the sample interval, the weighted proportion of the case with the characteristic of interest would be computed as follows:

$$= \frac{(112 \times 303) \% (37 \times 219)}{(2,350 \times 303) \% (650 \times 219)} , \frac{42,039}{854,400}$$

$$= .0492$$

The State case proportion for the "characteristic of interest" would be .0492. The reported number of cases with the characteristic of interest for the 12-month period, for comparability with other States, would be 148, i.e., .0492 x 3,000.

Note that each frequency of occurrence or proportion of the total sample must be calculated in the same way, e.g., number of families with an adults working, the number of families with a minor parent head of household, the number of child only cases, the number of cases with earned income, etc. Caseload weights are to be used in computing State-wide (Tribal-wide) characteristics.

Note, it is important that the appropriate code be entered on the coding schedule to identify the stratum from which the case was selected.

1530 Correcting for Undersampling Using a Reserve Sample Pool

Correcting for undersampling using the sample interval (see Section 1520, page 44) involves resampling the original frame using a new sample interval. A State (Tribe) may find this to be difficult and/or costly. The same result can be achieved by selecting a reserve sample pool at the time of original sample selection. The designated reserve sample cases are to be used only if correction for undersampling is required. Properly selected reserve pool cases retain the self-weighting property of the final sample. However, careful attention to the controls is necessary to ensure that cases are properly selected. Any number of cases may be designated as a reserve pool -- a good number could be 10 or 15 percent of the required sample size.

The State (Tribal) sampling plan must describe in detail the procedures for setting up a reserve sample pool. If a random number generator is used, the type of generator and seed number is to be specified.

1531 Procedure for Setting Up a Reserve Sample Pool

Procedures for setting up a reserve sample pool are similar to those outlined in Section 1430 (page 32). To illustrate the procedures, the example in Section 1430, is used, i.e., a State (Tribe) uses the systematic sampling method, elects the standard sample size, has an estimated average monthly caseload of 42,600 and estimates a 5 percent drop

rate for the 12-month sample period. In addition, the State (Tribe) specifies 15 percent of its selected sample as reserve pool cases each month.

1. Determine Average Monthly Sample Size

Divide the number of sample cases for which data is to be collected in the annual sample period by (1 - 0.15) to obtain the estimated total number of sample cases to be selected. In our example, according to Section 1430, Step 2, (page 33) the number of sample cases (completed and dropped cases) is 3,158. The number of cases to be selected would be $3158 \div (0.85)$, or 3,715, or an average of 309 cases per month. The average number to be placed in a reserve pool each month is 15% of 309 cases, or 46 cases (rounded down).

Note that the reserve pool is only to be used to correct for undersampling; it is not to be used to replace dropped cases.

2. Select Monthly Sample

Using the monthly sample size from Step 1, 309 cases, and the procedures outlined in Section 1430, Steps 5, 6 and 7, (page 34) compute the sample interval, determine a random start and select monthly sample cases from the sample frame.

3. Compute Secondary Interval for Selection of Reserve Pool Cases

Compute a secondary sample interval to be applied to the list of sample cases selected each month. This is obtained by dividing the estimated average monthly sample size by the average estimated number of cases designated for the reserve pool. In our illustration, the sample interval is $309 \div 46$, or 6.72.

4. Select and Identify Monthly Reserve Pool Cases

Since the interval obtained in Step 3 above is not a whole number, the acceptable method is to round up to the next higher number. (Note that rounding up is recommended to ensure that the basic sample will have a sufficient number of cases.) In our example, 1 out of every 7 cases on the monthly list of selected sample cases would be identified for the reserve pool, using a random start number between 1 and 7 inclusive. It is important in selecting monthly reserve pool cases to apply the same sample interval to the entire list of selected cases each month. This is an important part of the sample design and should not be violated in order to obtain a specific number of reserve pool cases each month.

5. Submission of Sample Cases Selected

The estimated average caseload, the specified percentage of monthly selected sample cases for the reserve pool, the computed sample intervals, manually generated random start and seed numbers to be used in the 12-month sample period for selection of total sample cases and reserve pool cases should be sent to the ACF Regional Administrator thirty (30) calendar days before the October sample selection. The monthly list of selected sample cases, with reserve pool cases identified, and computer generated random start and seed numbers should be submitted within 10 days of the date of selection specified in the State sampling plan.

If random numbers are used to identify cases for the reserve pool, it is absolutely essential that the total number of sample cases selected each month is known.

The following procedures are to be used and repeated each month if random numbers are used.

1. Determine the total number of sample cases selected. In our example, assume that the number selected for October was 309.
2. Multiply the number obtained in Step 1 by the percentage of selected sample cases specified for the reserve pool. In our illustration, the number of cases to be placed in a reserve pool for October is $309 \times .15$, or 46 cases (rounded down). Note that the same percentage must be applied each month.
3. Randomly select and identify reserve pool cases. In our example, 46 random numbers between 1 and 309, inclusive, would be selected.

If a Table of Random Numbers is used (see Appendix A, page 107), a photocopy of the page(s) used, showing start number, direction, and all selected numbers circled, is to be submitted each month along with the total list of selected sample cases. Sample cases corresponding to the circled random numbers are to be identified on the total list.

1532 Procedure for Obtaining Cases from a Reserve Sample Pool

States (Tribes) with reserve pools must use the same procedures in correcting for undersampling as outlined in Section 1520 (page 44) and 1530 (page 46). A revised estimate of the number of sample cases that should have been selected (excluding reserve pool cases) is to be computed. The difference between the number that should have been

selected and the number that was selected is the number of additional sample cases that will need to be selected from the reserve pool.

If a State (Tribe) uses a disproportionate stratified sample design, the State must maintain a separate reserve sample pool for each stratum. If a State with a disproportionate stratified sample design undersamples, the State must use the allocation procedures specified in its sampling plan to determine in which stratum (or strata) the State has undersampled. The State must correct for undersampling in each stratum in which undersampling occurred.

The same primary sample interval as determined in Section 1430, Step 5 (page 34), Step 2, must be used to select sample cases for months in the annual period for which such cases have not yet been selected. However, a new secondary sample interval to be applied to the monthly lists of selected sample cases must be used in identifying cases for the reserve pool.

The revised secondary sample interval is the product of the original secondary sample interval and the number of cases in the reserve sample pool prior to selection of cases from the reserve sample pool divided by the number of cases remaining in the reserve sample pool after selection of cases from the reserve sample pool.

1540 Correction for Undersampling or Oversampling When Sample Was Selected Using Simple Random Sampling

As described in Sections 1510 and 1520 (pages 42 and 44), there are two basic approaches to correcting the annual samples. The first approach is to correct the sample for both the months for which the sample has already been selected and the months for which the sample has not been selected. This approach provides an annual sample with approximately one-twelfth of the sample selected each month. The second approach is to make the entire adjustment in the months for which the sample has not yet been selected. Monthly samples selected using simple random sampling are less likely to need large adjustments for undersampling than for samples selected using systematic sampling. This is true because under simple random sampling a fix number of sampling units is selected each month regardless of the monthly caseload. Under systematic sampling, a fixed proportion of the caseload is selected each month. However, caseloads can vary from month to month. This variation of the monthly caseload results in variation in the monthly sample size.

1540.1 Correcting for Undersampling

If a small correction (e.g., less than 50 cases) is needed to ensure the State agency or Tribal grantee will meet its minimum required annual sample size and no month is substantially short of the approximate one-twelfth of the annual sample, then the State or Tribe should correct for undersampling by adjusting the sample size in months for which the sample has not yet been selected. If the sample for all months have been selected, then the adjustments should be made for the months in the last quarter of the fiscal year. On the other hand, if a large correction is needed for months in which the sample have already been selected, the State or Tribe should consider making adjustments to all monthly samples. To correct a monthly sample for undersampling , use the following procedures:

1. Retrieve the Original Monthly Sample Frame

As required under Section 1460, States and Tribes must to retain their original monthly sample frames. The State or Tribe should locate the original month sample frame for use in selecting the additional sample cases.

2. Review Original Determinations of Total Monthly Caseload and Average Monthly Sample Size

Review the original application of the sample selection procedures from Section 1440 Steps 2, 3, and 4 (Page 37) to identify the reason for undersampling (e.g., under estimated the number of listed-in-error cases).

3. Determine the Number of Additional Sample Cases Needed

Subtract the number of completed cases for the sample month from the required number of sample cases for the month to determine the short fall. Allowing for some additional listed-in-error cases (using the procedures in Section 1440, Step 4 (Page 37)), determine the number of additional sample cases to be selected from the original sample frame.

4. Select the Additional Sample Cases

Using the same procedures as in Section 1440, Step 5 (page 37), select the addition sample cases from the sample frame and forward the sample selection list to the ACF Region Office.

1540.2 Correcting for Oversampling

States are not required to correct for excessive oversampling. If correction is desired, the procedures to correct for excessive oversampling are similar to correcting for undersampling. However, instead of using the original monthly sample frame, the State or Tribe would use its monthly sample selection list and apply the following procedures:

1. Determine the Number of Cases on the Original Monthly Sample Selection List

This is the total number of sample cases, including cases that were listed-in-error.

2. Determine the Number of Excess Cases

In determining the number of excess cases, make allowances for the number of listed-in-error cases in the original sample. A proportion of these cases will be selected as cases to be removed. For example, if the original monthly sample had 325 cases of which 25 were listed-in-error, then the listed-in-error cases represent about 7.7% of the total sample and the total number of case of the sample frame. In reducing the sample so that there are at least 250 completed cases, the State or Tribe could expect about 20 listed-in-error cases. Therefore, the number of excess cases is 325 - 270 or 55 cases.

3. Select the Excess Cases to be Removed from the Sample

Using the same process as in Section 1440, Step 5 (page 37), select the number of excess cases from the original sample and forward the sample selection list of excess cases to the ACF Regional Office.

1600 WORK PARTICIPATION RATES

The purpose of the chapter is to provide States and Tribes with the methodology for calculating the monthly and annual work participation rates. In applying the methodology it is necessary to understand the statutory and regulatory provisions on the work participation requirements, the policies associated with waiver inconsistencies, and the TANF Data Report - Section One data elements used to capture the information needed for these calculations. It is for this reason that we have included, as background, certain mandatory work requirements from the law and the final regulation, which States must adhere to in administering their TANF programs. These provisions include:

4. Establishing the minimum all families and two-parent work participation rate requirements;
5. Defining the monthly and annual work participation rate calculations, including families that are to be included in or excluded from the calculation;
6. Identifying countable work activities, including limitation on certain activities;
7. Specifying the hourly requirements for engaged in work for the all families (also known as “overall”) and two-parent families work participation rates and related special circumstances (e.g., deemed engaged in work); and
8. Applying waiver inconsistencies as related to the work requirements.

1610 Work Participation Rate Standards and Caseload Reduction Credit

For each fiscal year, the statute specifies the all families and two-parent families minimum work participation rate standards that States must meet in administering their TANF Programs. These standards are shown in the following table:

Minimum Required Work Participation Rate		
Fiscal Year	All Families Rate	Two-Parent Families Rate
1997	25	75
1998	30	75
1999	35	90
2000	40	90
2001	45	90
2002 and thereafter	50	90

States that are successful in moving welfare recipients from welfare to self-sufficiency or otherwise reducing their welfare rolls are given credit for their efforts with respect to these standards. If the average number of cases receiving assistance, including assistance under a separate State program, for the State in the preceding fiscal year was lower than the average number of cases receiving assistance in FY '95, then the minimum work participation rate standard that the State must meet for the fiscal year will decrease by the amount of percentage points the caseload has fallen in comparison to the FY '95 caseload. This reduction in the minimum work participation rate standard is referred to as the caseload reduction credit. The caseload reduction credit will not include changes that are required by Federal law or that are as a result of changes in State eligibility criteria.

The minimum two-parent families participation rate the State must meet for the fiscal year decreases, at State option, by either:

1. The number of percentage points the prior-year two-parent caseload, including assistance under a separate State program (as provided in §261.42(b)), fell in comparison to the FY 1995 two-parent caseload; or
2. The number of percentage points the prior-year overall caseload, including assistance under a separate State program (as provided in §261.42(b)), fell in comparison to the FY 1995 overall caseload.

These calculations must disregard the net caseload reduction (i.e., caseload decreases offset by increases) due either to requirements of Federal law or to changes that a State has made in its eligibility criteria in comparison to its criteria in effect in FY 1995.

We will determine the total and two-parent caseload reduction credits that apply to each State based on the information and estimates reported to us by the State on eligibility policy changes, application denials, and case closures. In order to receive a caseload reduction credit, a State must submit a Caseload Reduction Report to us containing the following information:

1. A listing of, and implementation dates for, all State and Federal eligibility changes, as defined at §261.42, made by the State since the beginning of FY 1995;
2. A numerical estimate of the positive or negative impact on the applicable caseload of each eligibility change (based, as appropriate, on application denials, case closures or other analyses);
3. An overall estimate of the total net positive or negative impact on the applicable caseload as a result of all such eligibility changes;
4. An estimate of the State's caseload reduction credit;
5. Total prior year caseload;
6. The number of application denials and case closures for fiscal year 1995 and the prior fiscal year;
7. The distribution of such denials and case closures, by reason, for fiscal year 1995 and the prior fiscal year;
8. A description of the methodology and the supporting data that the State used to calculate its caseload reduction estimates;
9. A certification that it has provided the public an appropriate opportunity to comment on the estimates and methodology, considered their comments, and incorporated all net reductions resulting from Federal and State eligibility changes; and
10. A summary of all public comments.

We will calculate the caseload reduction credit that applies to the work participation rate(s). However, we will not calculate a caseload reduction credit unless the State reports case-record data on individuals and families served by any separate State program, as required under §265.3(d). A State may only apply to its participation rate a caseload reduction credit that we have calculated. If a State disagrees with the caseload

reduction credit, it may appeal the decision as an adverse action in accordance with §262.7.

A State must report the necessary documentation on caseload reductions for the preceding fiscal year by December 31.

1620 Definitions of Annual and Monthly Work Participation Rates

The statute defines the overall annual participation rate and the overall monthly participation rate as follow:

Overall Annual Participation Rate is the average of the State's overall participation rates for each month in the fiscal year.

Overall Monthly Participation Rate is: (1) the number of families receiving TANF assistance that include an adult or a minor head-of-household who is engaged in work for the month (the numerator), divided by (2) the number of families receiving TANF assistance during the month that include an adult or a minor head-of-household minus the number of families that are subject to a penalty for refusing to work in that month (the denominator). However, if a family has been sanctioned for more than three of the last 12 months, we will not exclude it from the participation rate calculation.

Other circumstances for which a family may be disregarded from the overall monthly work participation rate calculation are:

1. A State has the option of not requiring a single custodial parent caring for a child under age one to engage in work. If the State adopts this option, we will disregard such a family in the participation rate calculation for a maximum of 12 months;
2. At State option, a family that is participating in a Tribal Work Program may be included or excluded from the work participation rate calculation. If the State has opted to exclude all Tribal Work Program participants from its work participation rate, such families will be excluded from the calculation;
3. A family that is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Social Security Act will be excluded from the participation rate calculation; and

4. Some States have an approved 1115 waiver, which contains provisions that exempt certain groups of recipients from participating in work activities. Based on these approved 1115 waiver inconsistencies, we will exclude such families from the participation rate calculation.

The statute defines the two-parent annual participation rate and the two-parent monthly participation rate as follow:

Two-parent Family Annual Participation Rate is the average of the State's two-parent participation rates for each month in the fiscal year.

Two-parent Family Monthly Participation Rate is: (1) the number of two-parent families receiving TANF assistance in which the adults or minor child head-of-household and other parent meet the requirements set forth in §261.32 for the month (the numerator), divided by (2) the number of two-parent families receiving TANF assistance during the month minus the number of two-parent families that are subject to a penalty for refusing to work in that month (the denominator). However, if a family has been sanctioned for more than three of the last 12 months, we will not exclude it from the participation rate calculation.

Other circumstances for which a family may be disregarded from the two-parent monthly work participation rate calculation are:

1. At State option, a family that is participating in a Tribal Work Program may be included or excluded from the work participation rate calculation. If the State has opted to exclude all Tribal Work Program participants from its work participation rate, such two-parent families will be excluded from the two-parent participation rate calculation;
2. A two-parent family that is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Social Security Act will be excluded from the participation rate calculation;
3. Some States have an approved 1115 waiver, containing provisions that exempt certain groups of recipients from participating in work activities. Based on these approved 1115 waiver inconsistencies, we will exclude such two-parent families from the two-parent participation rate calculation; and
4. If a two-parent family includes a disabled parent, we will not consider the family as a two-parent family for the purpose of calculating the two-parent work participation rate.

For the purpose of calculating the two-parent work participation rate, the two-parent families must include, but is not limited to, any family with two natural or adoptive parents (of the same minor child) receiving assistance and living in the home, unless both are minor and neither are head-of-household. This is a minimal definition. At State option, a broader definition of two-parent families may be used. For example, a State may want to include step-parents and/or non-custodial parents.

A State may opt to include a noncustodial parent as part of the eligible family receiving assistance. If the State does so, the noncustodial parent may receive assistance or other services and may participate in work activities. The included noncustodial parent must live in the State, but may not live with his/her child(ren). A noncustodial parent may participate in work activities funded under the State TANF Program. In addition, the State must report the noncustodial parent as part of the TANF family. However, the State may choose whether a two-parent family with a noncustodial parent as one of the two parents is a two-parent family for the purposes of calculating the two-parent work participation rate. If a State chooses to exclude a two-parent family with a noncustodial parent as one of the parents from the two-parent work participation rate, the State must code the TANF Data Report data element "Type of Family for Work Participation" (data element #12) with a "2," code "Family Affiliation" (data element #30) with a "1," code "Noncustodial Parent Indicator" (data element #31) with a "1," code "Parent with a Minor Child in the Family" (data element #39) with a "1," and code the data element "Work Participation Status" for the noncustodial parent with a "99."

1630 Countable Work Activities

The statute requires that adults and minor child heads-of-household participate in certain work activities. Countable work activities include the following:

1. Unsubsidized employment;
2. Subsidized private sector employment;
3. Subsidized public sector employment;
4. Work experience;
5. On-the-job training (OJT);
6. Job search and job readiness assistance;
7. Community service programs;
8. Vocational educational training;
9. Job skills training directly related to employment;
10. Education directly related to employment, in the case of a recipient who has not received a high school diploma or a certificate of high school equivalency;

11. Satisfactory attendance at secondary school or in a course of study leading to a certificate of general equivalence, if a recipient has not completed secondary school or received such a certificate; and
12. Providing child care services to an individual who is participating in a community service program.

Each adult (or minor child head-of-household) has a life-time limit on countable hours of participation for vocational educational training. Vocational educational training may only count as a work activity for a total of 12 months.

There are four limitations on job search and job readiness training. These are:

1. Job search and job readiness assistance only count for 6 weeks in any fiscal year;
2. An individual's participation in job search and job readiness assistance counts for no more than 4 consecutive weeks;
3. If the State's (Tribe's) total unemployment rate for a fiscal year is at least 50 percent greater than the United States' total unemployment rate for that fiscal year or the State is a "needy" State (within the meaning of Section 403 (b)(6)), then an individual's participation in job search or job readiness assistance counts for up to 12 weeks in that fiscal year; and
4. A State may count 3 or 4 days of job search and job readiness assistance during a week as a full week of participation, but only once for any individual.

Some States have an approved 1115 waiver. These waivers may include provisions that allow the State to count certain additional work activities (e.g., extending participation in vocational education and/or job search and job readiness training beyond statutory limitations). The average hours per week of participation in these additional work activities is captured on the TANF Data Report by the data element "Additional Work Activities Permitted Under Waiver Demonstration."

1640 Required Hours of Work to be "Engaged in Work"

A family counts as participating in work for the overall work participation rate for a month in which an adult or minor child head-of-household is engaged in work. That is, the adult or minor child head-of-household participates in countable work activities during the month for at least the minimum average number of hours per week as specified in the following table:

If the fiscal year is:	Then the minimum average hours per week is:
1997	20
1998	20
1999	25
2000 or thereafter ...	30

At least 20 of the above hours per week must come from work activities (1) through (8) and (12), as shown in Section 1630. (Hereafter, we will refer to these work activities as "core" work activities.) Hours above the 20 hours per week may also come from work activities (9), (10), and (11) as shown in Section 1630. A State with an approved 1115 waiver may be able to count additional work activities (see Section 1630 work activity (13) and Section 1650) as a core work activity and count the hours of participation in these additional work activities toward the 20 hours and the hours above the 20 hours.

A two-parent family counts as engaged in work for the month in determining the two-parent rate, if one of the following is applicable:

1. If the family does not receive federally-funded child care and an adult (or minor child head-of-household) and the other parent in the family are participating in work activities for an average of at least 35 hours per week during the month, and, at least 30 of the 35 hours per week come from participation in the core work activities, (1) through (8) and (12) listed in Section 1630. The family counts as engaged in work. Above the 30 hours per week, countable hours may also come from work activities (9), (10), and (11) from those work activities listed in Section 1630.

2. If the family receives federally-funded child care, an adult in the family is not disabled or caring for a severely disabled child, and an adult (or minor child head-of-household) and the other parent in the family are participating in work activities for an average of at least 55 hours per week during the month, and, at least 50 of the 55 hours per week come from participation in the core work activities, (1) through (8) and (12) listed in Section 1630. The family counts as engaged in work. Above the 50 hours per week, countable hours may also come from work activities (9), (10), and (11) from those work activities listed in Section 1630.

1641 Deemed Engaged In Work

For purposes of the overall work participation and two-parent work participation rate, a family with single minor child head-of-household or married teen parent is deemed engaged in work in a month if (s)he maintains satisfactory attendance at a secondary school or the equivalent during the month or participates in education directly related to employment for an average of at least 20 hours per week during the month.

A single custodial parent or caretaker relative with a child under age six will count as engaged in work if (s)he participates for at least an average of 20 hours per week. Hours of participation in all twelve work activities specified in Section 1630 (not just the core work activities) apply toward meeting this 20 hour requirement. If the State has an approved 1115 waiver, the additional hours of work activities permitted under the waiver also count toward the 20 hours.

1642 The Thirty (30) Percent Limit

In counting families for each monthly participation rate, not more than 30 percent of families with individuals engaged in work in a month may be included in the numerator because the individuals are: (1) participating in vocational educational training; or (2) beginning in fiscal year 2000 and thereafter, [individuals] deemed to be engaged in work by participating in work activities (10) and (11) as listed in Section 1630. For each month in which the State exceeds the 30% limit, its overall and two parent work participation rates will be adjusted by decreasing the number of participating families until the 30% limit is not exceeded.

1650 Waiver Inconsistencies as Related to the Work Requirements

Section 415 of the Social Security Act states that any waiver granted to a State under Section 1115 of the Act would delay implementation of the amendments made by PRWORA to the extent that such amendments are inconsistent with the waiver.

The regulations provide States (not applicable to Tribes) with guidance on waiver inconsistencies as related to the work participation rates and the time limits. The definitions of "waiver" and "inconsistent" are:

Waiver - consists of the work participation or time-limit component of the State's demonstration project under section 1115 of the Act. The component includes the revised AFDC requirements indicated in the State's waiver list, as approved by the Secretary under the authority of section 1115, and the associated AFDC provisions that did not need to be waived.

Inconsistent - means that complying with the TANF work participation or sanction requirements at section 407 of the Act, or the time-limit requirement at section 408(a)(7) of the Act, would necessitate that a State change a policy reflected in an approved waiver.

In order for the State's alternative waiver requirements to be considered in the calculation of the work participation rates, the Chief Executive Officer must certify in writing to the Secretary:

1. The specific inconsistencies that the state is choosing to continue; and
2. Consistent with the waiver, the policies that the State will use to:
 - a. Exempt individuals from requirements to participate in work activities;
 - b. Assign individuals to an alternative work activities or to an alternative number of work hours; and
 - c. Determine exemptions from or exceptions to the time limits.

The TANF Data Report has four data elements that capture data related to the State waiver. These data elements are:

1. Waiver Evaluation Experimental and Control Group;

This data element is used to identify families that are members of a control group or experimental group of a Welfare Reform Demonstration Project for the purpose of continuing an impact analysis. Such families are excluded from the calculation of the work participation rates.

2. Work Participation Status;

This data element contains the following two codes that identify families that are disregarded from the work participation rate based on approved 1115 welfare reform waivers:

- 03 = Disregarded, family is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Social Security Act

04 = Disregarded from the work participation rate based on an approved waiver inconsistency that exempts the family from participation

3. Additional Work Activities Permitted Under Waiver Demonstration

This data element is used to code the average hours per week of participation in work activities that are permitted and countable under a Federally-approved 1115 waiver, but not countable under the statute.

4. Required Hours of Work.

Some States have a Federally-approved 1115 waiver that permits the State to set on an individual basis the number of hours of participation for an individual to be counted as engaged in work. The data element is used to capture the required hours of work for such an individual.

1660 Tribal Work Participation Rates

Under each Tribal Family Assistance Plan, the Tribe and the Federal Government have negotiated and agreed upon a number of operating procedures that effect the calculation of the work participation rates, including the following:

- a. Minimum required hours of participation in work activity to be considered engaged in work .
- b. Activities which count toward meeting the minimum hours of work .
- c. The participation rate standard to be met.
- d. Groups for which participation rate are to be measured (e.g., one-parent families, all adults).
- e. The year by which the participation rate standard is to be achieved.

1670 Methodology Used in Calculating the Monthly Work Participation Rate

The monthly TANF population consists of all families who receive assistance under the State TANF Program for the reporting month. For the all family (and two parent family) work participation rate, we are interested in a portion of these families. This smaller

grouping is referred to as a subpopulation or subdomain. For the overall work participation rate, the subpopulation of interest is all TANF families with an adult or minor child head-of-household, except those families that are disregarded due to:

1. Single custodial parent with child under 12 months;
2. Sanctioned for the reporting month, but not sanctioned for more than 3 months within the preceding 12-month period;
3. Participating in a Tribal Work Program, State has opted to exclude all Tribal Work Program participants from its Work Participation rate;
4. Family is part of an ongoing research evaluation (as a member of a control group or experimental treatment group) approved under Section 1115 of the Social Security Act; and
5. An approved waiver inconsistency that exempts the family from participation.

Similarly, for the two parent work participation rate, the subpopulation of interest is all two parent TANF families with an adult or minor child head-of-household, except those that are disregarded due to:

1. Sanctioned for the reporting month, but not sanctioned for more than 3 months within the preceding 12-month period;
2. Participating in a Tribal Work Program, State has opted to exclude all Tribal Work Program participants from its Work Participation rate;
3. Family is part of an ongoing research evaluation (as a member of a control group or experimental treatment group) approved under Section 1115 of the Social Security Act; and
4. An approved waiver inconsistency that exempts the family from participation.

The standard statistical methodology for estimating means (proportions are special cases of means) over subpopulations from universe data, non-stratified samples and stratified samples are shown below.

1661 Calculation of the Monthly Work Participation Rate from Universe Data

For a State that reports the TANF Data Report for its entire caseload, the monthly work participation rate (R) is the total number of families participating from the subpopulation (Y_j) divided by the total number of families in the subpopulation (N_j) and is calculated as follows:

$$R = \frac{Y_j}{N_j} = \frac{\sum_{i=1}^N Y_i}{N_j}$$

where $i = 1, 2, \dots, N$

$Y_i = 1$, if the i^{th} family is participating in j^{th} subpopulation

$= 0$, if the i^{th} family is not participating in j^{th} subpopulation

$N_j =$ the number of cases in the j^{th} subpopulation

For example, a State with a monthly caseload of 42,600 families reports its entire caseload as follows:

The number of families that are:	All Families	Two-Parent Families
1. Reported (i.e., total caseload)	42,600	3,000
2. No Parent Families	11,500	-
3. Listed-in-error	50	-
4. Disregarded: single custodial parent with child under 12 months	2,200	-
5. Disregarded: sanctioned for the reporting month, but not sanctioned for more than 3 months in the preceding 12-month period	1,775	245
6. Disregarded: Participating in a Tribal work program	25	0
7. Disregarded: family is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Act	0	0
8. Disregarded (#5): Based on an approved waiver inconsistency	2,000	295
9. Required to Participate (item #1 minus item 2 through item 8)	25,050	2,460
10. Participating	8,338	1,225
11. Counting toward the 30% limit	1,731	120

The ratio estimator for the all family work participation rate is:

$$R = \frac{Y_j}{N_j} = \frac{\sum_{i=1}^N Y_i}{N_j} = \frac{8,338}{25,050} = 0.3329$$

The ratio estimator for the two-parent work participation rate is:

$$R = \frac{Y_j}{N_j} = \frac{\sum_{i=1}^N Y_i}{N_j} = \frac{1,225}{2,460} = 0.4980$$

1662 Calculation of the Monthly Work Participation Rate from Sample Data

For a State that samples but does not stratify, the estimated monthly work participation rate is calculated using the ratio estimator.

The ratio estimator is:

$$\hat{R} = \frac{N \bar{y}_j}{N \bar{x}_j} = \frac{\frac{N}{n} \sum_{i=1}^n y_i}{\frac{N}{n} \sum_{i=1}^n x_i} = \frac{\frac{N}{n} \sum_{k=1}^{n_j} y_{jk}}{\frac{N}{n} \sum_{k=1}^{n_j} x_{jk}}$$

- y_i = 1, if the i^{th} family is participating in j^{th} subpopulation
 = 0, if the i^{th} family is not participating in j^{th} subpopulation
 x_i = 1, if the i^{th} family is in j^{th} subpopulation
 = 0, if the i^{th} family is not in j^{th} subpopulation

The estimated variance for the ratio estimator is:

$$v(\hat{R}) = \frac{(1+f)}{n \bar{x}^2} \frac{\sum_{i=1}^n (y_i - \hat{R} x_i)^2}{n-1}$$

where:

$$f = \frac{n}{N}$$

$$R = \frac{\hat{Y}}{\hat{X}}$$

For example, a State with a monthly caseload of 42,600 families reports based on a non-stratified sample as follows:

The number of families that are:	All Families	Two-Parent Families
1. Total Caseload	42,600	3,000
2. Reported (sample size)	255	51
3. No Parent Families	60	-
4. Listed-in-error	2	-
5. Disregarded: single custodial parent with child under 12 months	10	-
6. Disregarded: sanctioned for the reporting month, but not sanctioned for more than 3 months in the preceding 12-month period	19	4
7. Disregarded: Participating in a Tribal work program	0	0
8. Disregarded: family is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Act	0	0
9. Disregarded (#5): Based on an approved waiver inconsistency	10	5
10. Required to Participate (item #2 minus item 3 through item 9) in the sample	154	42
11. Participating in the sample	56	21
12. Counting toward the 30% limit in the sample	12	3

For the all family rate:

The estimated total number of families required to participate from the total caseload (i.e., the denominator of the participation rate) is:

$$\frac{42,600 \times 154}{255} = 25,727.0588$$

The estimated total number of families that are participating from the total caseload (i.e., the numerator of the participation rate) is:

$$\frac{42,600 \times 56}{255} = 9,355.2941$$

The estimated monthly all family work participation rate is:

$$\hat{R} = \frac{N\bar{y}_j}{N\bar{x}_j} = \frac{\frac{N}{n} \sum_{i=1}^n y_i}{\frac{N}{n} \sum_{i=1}^n x_i} = \frac{\frac{N}{n} \sum_{k=1}^{n_j} y_{jk}}{\frac{N}{n} \sum_{k=1}^{n_j} x_{jk}} = \frac{\frac{42,600 (56)}{255}}{\frac{42,600 (154)}{255}} = 0.3636$$

The estimated number of participating families that count toward the 30% limit is:

$$\frac{42,600 \times 12}{255} = 2,004.7059$$

The number of participating families due to vocational education (and after 1999 due to deemed engaged in work based on work activities 10 and 11 from Section 1630) is less than 30% of total participating families. Therefore, no adjustment is necessary.

For the two-parent work participation rate:

The estimated total number of two-parent families required to participate from the total caseload (i.e., the denominator of the participation rate) is:

$$\frac{3,000 \times 42}{51} = 2,470.5882$$

The estimated total number of two-parent families that are participating from the total caseload (the numerator of the participation rate) is:

The estimated monthly two-parent work participation rate is:

$$\hat{R} = \frac{N\bar{y}_j}{N\bar{x}_j} = \frac{\frac{N}{n} \sum_{i=1}^n y_i}{\frac{N}{n} \sum_{i=1}^n x_i} = \frac{\frac{N}{n} \sum_{k=1}^{n_j} y_{jk}}{\frac{N}{n} \sum_{k=1}^{n_j} x_{jk}} = \frac{3,000 (21)}{51} = 0.5000$$

the estimated number of participating two-parent families that count toward the 30% limit is:

$$\frac{3,000 \times 3}{51} = 176.4706$$

The number of two-parent participating families due to vocational education (and after 1999 due to deemed engaged in work based on work activities 10 and 11 from Section 1630) is less than 30% of total number of two-parent families that are participating. Therefore, no adjustment is necessary.

1663 Calculation of the Monthly Work Participation Rate from Stratified Sample Data

For a State that selects a stratified sample the monthly work participation rate as estimated with the ratio estimator is:

$$\hat{R} = \frac{\hat{Y}_j}{\hat{X}_j} = \frac{\sum_{h=1}^H N_{hj} \bar{y}_{hj}}{\sum_{h=1}^H N_{hj} \bar{x}_{hj}} = \frac{\sum_{h=1}^H \frac{N_h}{n_h} \sum_{k=1}^{n_{hj}} y_{hjk}}{\sum_{h=1}^H \frac{N_h}{n_h} \sum_{k=1}^{n_{hj}} x_{hjk}}$$

where $k = 1, 2, \dots, n_{hj}$

$h = 1, 2, \dots, H$

n_{hj} = the number of families in h^{th} stratum and the j^{th} subpopulation

H = the number of strata

y_{hjk} = 1, if the i^{th} family from stratum h is participating in the j^{th} subpopulation.

= 0, if the i^{th} family from stratum h is not participating in the j^{th} subpopulation.

The estimated variance for the ratio estimator is :

$$v(\hat{R}) \approx \frac{1}{N^2} \sum_{h=1}^H \frac{f_h}{n_h} S_{hZ}^2$$

$$f_h = \frac{n_h}{N_h}$$

where:

$$S_{hZ}^2 = S_{hY}^2 + R^2 S_{hX}^2 + 2R p_{hXY} S_{hX} S_{hY}$$

$$p_{hXY} = \frac{S_{hXY}}{S_{hX} S_{hY}}$$

$$S_{hX}^2 = \frac{1}{N_h} \sum_{i=1}^{N_h} (x_{hi} - \bar{X}_h)^2$$

$$S_{hY}^2 = \frac{1}{N_h} \sum_{i=1}^{N_h} (y_{hi} - \bar{Y}_h)^2$$

For example, a State with a monthly caseload of 42,600 families reports based on a stratified sample, in which the two-parent families are in stratum 02 and all other families are in stratum 01, as follows:

The number of families that are:	All Families		Two-Parent Families
	01	02	02
1. Total Caseload	39,600	3,000	3,000
2. Reported (sample size)	204	51	51
3. No Parent Families	60	0	-
4. Listed-in-error	2	0	-
5. Disregarded: single custodial parent with child under 12 months	10	0	-
6. Disregarded: sanctioned for the reporting month, but not sanctioned for more than 3 months in the preceding 12-month period	15	4	4
7. Disregarded: Participating in a Tribal work program	0	0	0
8. Disregarded: family is part of an ongoing research evaluation (as a member of a control group or experimental group) approved under Section 1115 of the Act	0	0	0
9. Disregarded (#5): Based on an approved waiver inconsistency	15	5	5
10. Required to Participate (item #2 minus item 3 through item 9) in the sample	112	42	42
11. Participating in the sample	35	21	21
12. Counting toward the 30% limit in the sample	9	3	3

For the all family rate:

The estimated total number of families required to participate from the total caseload (i.e., the denominator of the participation rate) is:

$$\frac{39,600 (112 }{204} \% \frac{3,000 (42 }{51} \cdot 24,211.7647$$

The estimated total number of families that are participating from the total caseload (i.e., the numerator of the participation rate) is:

$$\frac{39,600 (35 }{204} \% \frac{3,000 (21 }{51} \cdot 8,029.4118$$

The estimated monthly all family work participation rate is:

$$R \cdot \frac{\frac{39,600 (35 }{204} \% \frac{3,000 (21 }{51}}{\frac{39,600 (112 }{204} \% \frac{3,000 (42 }{51}} \cdot \frac{8,029.4118}{24,211.7647} \cdot 0.3316$$

The estimated number of participating families that count toward the 30% limit is:

$$\frac{39,600 (9 }{204} \% \frac{3,000 (3 }{51} \cdot 176.4706$$

In this example, the two-parent work participation rate is based on the data in stratum 02 and the result are the same as in the previous example.

1664 Adjusting the Monthly Work Participation Rate for Exceeding the 30% Limit

If, in the example from Section 1662 for the all family work participation rate, the number of participating families that count toward the 30% limit is 20 sample cases (instead of 12 sample cases), then the 30% limit is exceeded. In this instance, the estimated total number of participating families that count toward the limit is:

$$\frac{42,600 (20)}{255} = 3,341.1765$$

The estimate number of participating families that counts toward the 30% limit (3,341.17) exceeds the 30% limit (3,341.1765 / 9,355.2941 = .3571.) To make the adjustment, first determine the number of participating families that do not count toward the 30% limit (9,355.2941 - 3,341.175 = 6,014.1176). This group represents the 70% of the total adjusted number of participating families. Thus, the total adjusted number of participating families is calculated by dividing the number of participating families that do not count toward the 30% limit by 0.7 (i.e., 6,014.1176 / 0.7 = 8,591.5966). The adjusted all family work participation rate is

$$\frac{8,591.5966}{25,727.0588} = 0.3340$$

The adjustment from 0.3636 to 0.3340 is a decrease in the participation rate of 0.296 or 2.96%.

1680 TANF Data Reporting Elements Used in Calculating the Monthly Work Participation Rate

The overall and two parent work participation rates are calculated based on data provided on the TANF Data Report - Section One and, for States that do not use a stratified sample, the TANF Data Report - Section Three, data element #8, the total number of families. For States that use a stratified sample design, the State must submit for each month the number of families in each stratum. The TANF Data Report - Section One data elements used in the calculation are listed below:

Item Number	Data Element
1	State FIPS code
4	Reporting Month
5	Stratum
9	Disposition
12	Type of Family for Work Participation
17	Receives Subsidized Child Care

Item Number	Data Element
27	Waiver Evaluation Experimental and Control Group
30	Family Affiliation
31	Non-custodial Parent
32	Date-of-Birth
37	Marital Status
38	Relationship to Head-of-Household
39	Parent with a Minor Child
48	Work Participation Status
49	Unsubsidized employment
50	Subsidized private sector employment
51	Subsidized public sector employment
52	Work experience
53	On-the-job training (OJT)
54	Job search and job readiness assistance
55	Community service programs
56	Vocational educational training
57	Job skills training directly related to employment
58	Education directly related to employment, in the case of a recipient who has not received a high school diploma or a certificate of high school equivalency
59	Satisfactory attendance at secondary school or in a course of study leading to a certificate of general equivalence, if a recipient has not completed secondary school or received such a certificate
60	Providing child care services to an individual who is participating in a community service program
61	Additional Work Activities Permitted Under Waiver

Item Number	Data Element
63	Required Hours of Work
67	Date-of-Birth (Child)

1700 STATISTICAL METHODS IN DATA ANALYSIS

A State or Tribal grantee may comply with the reporting requirements of TANF by reporting on the entire TANF caseload or by using data collected through scientifically acceptable sampling methods approved by the Secretary. In addition to information necessary to compute participation rates, the sample will provide demographic and financial characteristics of families, including age, race, sex, education, income, and type and amount of assistance of family members. Together with a sample of closed cases, States will be able to generate data on families applying for assistance, families receiving assistance, and families that have become ineligible. By carefully analyzing the data, States will be able to examine trends in employment and earnings of families with minor children. (If the sample is sufficiently large enough, the State will be able to produce accurate and reliable information on the number of hours of participation in different activities such as, education, subsidized employment, unsubsidized employment, job search, etc.)

The following subsections outline some of the more common statistical techniques that can be used in the statistical analysis process. States are encouraged to do their own research and develop statistical methodology to meet their own special needs in data analysis.

1710 Statistical Tests of Significance

Because sample results will normally be in error by some amount simply because they are based on a sample, inferences from sample results must take into account sampling error. The means for doing this is known as testing statistical hypotheses and estimation (including confidence interval construction) for statistically significant differences. The "difference" may be between two or more samples or between a sample and the population. The hypothesis used in testing differences (called the null hypothesis) is that there is no "true" difference between the observed results, i.e., that the observed difference is only due to random errors or chance. When the observed difference is sufficiently larger than the sampling error, it can be stated that there is a statistically significant difference, i.e., that a "true" difference most likely exists.

This section is concerned with various statistical procedures that test null hypotheses. The tests that follow are appropriate for the systematic random or simple random sampling methods.

1711 Testing the Representativeness of the Sample with the Caseload

There are several statistical techniques that can be used to ensure that the sample is acceptably representative of the caseload from which it is drawn. These techniques involve the comparison of sample case findings with known caseload information. The two statistical methods that are discussed are: (1) the confidence interval estimate of population parameters for averages and proportions, and (2) the one-sample chi-square test for distribution of sample findings.

All States and Tribal grantees collect information on their entire caseload on an ongoing basis -- monthly, quarterly, or annually. Caseload data closest to those of the sample period should be used in making the comparisons. If the test reveals significant differences in results, the method of sample selection and sample sizes should be re-examined to provide assurance that no errors have occurred in the sample selection process.

Sections 1711.1 and 1711.2 below illustrate the methods using the confidence interval to estimate representativeness of the sample when proportions are not used and when proportions are used.

1711.1 Comparison of Sample and Total Caseload When Proportions Are Not Used

In order to determine whether the sample average dollar amount of assistance is representative of the caseload, use the following procedure:

For our example, assume that the average dollar amount of assistance in the total caseload is \$90.20 and in the sample, \$95.35 with a standard error of \$5.48.

The equation for a 95 percent confidence interval in this calculation is approximately as follows:

$$\bar{x} \pm 1.96 \left(\frac{s}{\sqrt{n}} \right)$$

where:

n = number of sample cases for which a review was completed;

\bar{x} = mean dollar amount of assistance per sample case for which data was collected = $\frac{\sum x_i}{n}$;

\sum = the sum operator;

s = estimated standard deviation = $\sqrt{\frac{\sum (x_i - \bar{x})^2}{n - 1}}$;

x_i = actual dollar amount of assistance for a sample case; and

$\frac{s}{\sqrt{n}}$ = estimated standard error of \bar{x} .

If, in our example, the estimated standard error of the sample average dollar amount of assistance is \$5.48, then 1.96 times the standard error is \$10.74. Therefore, the 95 percent confidence limits are \$95.35 \pm \$10.74, or \$84.61 to \$106.09. Since the confidence interval in this case includes the "true" or total caseload average dollar amount of assistance of \$90.20, there is no evidence that the sample is not representative of the caseload from which it is drawn.

1711.2 Comparison of Sample and Total Caseload When Proportions Are Used

If information on the proportion of the entire caseload having certain characteristics is available, a similar test can be conducted. For example, if the proportion of 2-parent families in the entire caseload is known, the sample proportion can be compared to this figure. In this situation, a confidence interval is calculated around the total caseload, or population value, to see if the sample value is included.

The sample proportion of 2-parent families should fall within the following interval:

$$P \pm 1.96 \sqrt{\frac{P(1 - P)}{n}}$$

where:

P = proportion of 2-parent families in the caseload; and

n = number of completed sample cases

It should be noted that the best estimate of a standard error uses the most complete data readily available. Theoretically, total caseload data, if available, should be used to calculate the standard error wherever findings are compared between sample cases and the total caseload. Calculation of the standard error from total caseload data is a relatively simple process where proportions are being compared. However, where proportions are not used, as in comparing average dollar amount of assistance, calculating the best estimate of the standard error from the total caseload is a very lengthy process. In such circumstances, the standard error is calculated from the sample data.

1711.3 One Sample Chi-Square (X^2) Test

This method for testing the representativeness of samples compares the distribution of sample cases by certain characteristics with that of the total caseload. The assumption is that a certain amount of information is available based upon universe counts of the entire caseload.

The most readily available characteristic that can be compared is the distribution of cases by county, or other geographic areas. If cases in the sample have been drawn with each case having an equal chance of selection, they would be distributed among the counties or other geographic areas in the same proportions as cases in the total caseload. To determine if the county (or other geographic area) variations in sample cases are large enough to support a possible suspicion of bias, the chi-square test of significant differences can be computed. In the chi-square test, theoretical, i.e., expected values are computed. If the observed values differ greatly from these expected values, a significant concentration is in evidence.

The equation for computing the chi-square statistic is as follows:

$$X^2 = \sum_j \left[\frac{(O - E)^2}{E} \right]$$

where:

j = the sum of all categories;

O = observed number of cases in each category (or case characteristic);
and

E = expected number of cases in each category (or case characteristic) which when calculated is as follows:

$$\frac{\text{number of population cases in category}}{\text{total cases in population}} \times \text{sample size}$$

The following example will illustrate the method.

Comparison of Distributions of Cases by County Groups			
County Groups	Total Caseload (U)	Observed Number of Cases in Sample (O)	Expected Number of Cases in Sample $E = \frac{U}{U} \times O$
# 1	1,000	11	$\frac{1,000}{20,000} \times 200 = 10$
# 2	3,000	33	$\frac{3,000}{20,000} \times 200 = 30$
# 3	5,000	58	$\frac{5,000}{20,000} \times 200 = 50$
# 4	4,000	57	$\frac{4,000}{20,000} \times 200 = 40$
# 5	2,000	13	$\frac{2,000}{20,000} \times 200 = 20$
# 6	2,000	13	$\frac{2,000}{20,000} \times 200 = 20$

Comparison of Distributions of Cases by County Groups			
County Groups	Total Caseload (U)	Observed Number of Cases in Sample (O)	Expected Number of Cases in Sample $E = \frac{U}{N} \times O$
# 7	3,000	15	$\frac{3,000}{20,000} \times 200 = 30$
	$\Sigma U = 20,000$	$\Sigma O = 200$	$\Sigma E = 200$

$$\begin{aligned}
 \chi^2 = \sum_j \left[\frac{(O - E)^2}{E} \right] &= \frac{(11 - 10)^2}{10} + \frac{(33 - 30)^2}{30} + \\
 &\frac{(58 - 50)^2}{50} + \frac{(57 - 40)^2}{40} + \frac{(13 - 20)^2}{20} + \\
 &\frac{(15 - 30)^2}{30} = 21.31
 \end{aligned}$$

To show significance, the computed value must exceed the critical value in the following table.

Critical Chi-Square (χ^2) Values	
Degrees of Freedom	Critical Value of χ^2 Statistic
1	3.84
2	5.99
3	7.81

Critical Chi-Square (X^2) Values	
Degrees of Freedom	Critical Value of X^2 Statistic
4	9.49
5	11.1
6	12.6
7	14.1
8	15.5
9	16.9
10	18.3
11	19.7
12	21.0
13	22.4
14	23.7
15	25.0
16	26.3
17	27.6
18	28.9
19	30.1
20	31.4
21	32.7
22	33.9
23	35.2
24	36.4
25	37.7
26	38.9
27	40.1

The critical value is dictated by the number of "degrees of freedom." Problems of this type have degrees of freedom equal to the number of categories minus "1", in this example, 7 & 1 = 6. The critical value of 12.6 is clearly exceeded. Thus, a suspicion of possible bias in the sample is given greater validity and observed variation in such categories is more than can reasonably be attributed to chance. (The table of values is set at 95 percent, i.e., when a computed value exceeds the table value, there is less than 5 chances out of 100 that the large observed differences are due to chance. This predefined statistical probability, in this table, set at alpha = .05 is called a Type I error.)

Note that the chi-square test is inapplicable, i.e., serious distortions of results may appear, when 20 percent or more of the groups have expected values of less than "5" or any group has an expected frequency of less than "1." Under these circumstances, groups must be combined until the requirements are satisfied. When practical, such combinations should be made before obtaining or looking at the sample results, in order to avoid biases in the test. The combinations should be meaningful, e.g., rural counties, northern counties, etc.

If there are only two groups, each expected value must be "5" or more. In such tables, the preferred calculation of chi-square is as follows:

$$X^2 = \sum_j \left[\frac{(*Observed \& Expected* \& 0.5)^2}{Expected} \right]^6$$

6/ The parallel bars, **, indicate absolute value of the term, i.e., ignore the sign and assume positive. The 0.5 figure is called the Yates Correction for Continuity.

1712 Testing Differences of Proportions Between Samples

Repeated sampling from a given population should not differ from each other by more than chance fluctuations.

The equations used to determine the statistical significance the of difference in proportions, such as participation rates, between two reporting periods and using a predefined probability (Type I error, or alpha = .05) are as follows:

$$p = \frac{n_A p_A \% n_B p_B}{n_A \% n_B}$$

where:

p = weighted participation rate for reporting periods A and B combined;

p_A = participation rate for reporting period A;

p_B = participation rate for reporting period B;

n_A = number of sampled cases in reporting period A; and

n_B = number of cases reviewed in reporting period B.

The equation for the statistic is as follows:

7

$$z = \frac{p_A - p_B}{\sqrt{p(1-p) \times \left(\frac{1}{n_A} + \frac{1}{n_B} \right)}}$$

If the computed value of "z" is greater than 1.96, a significant difference exists between p_B and p_A .

7/ The "z" test is satisfactory only if both n_A and n_B are large.

For example, assume a participation rate of 33.2 percent based on 1,573 sample cases in sample period A is compared with an participation rate of 25.7 percent based on 1,495 sample cases in sample period B. The test of significance would be computed as follows:

$$p = \frac{(1,573)(0.332) \% (1,495)(0.257)}{1,573 \% 1,495} = 0.295453 \text{ or } 0.295$$

$$z = \frac{*.332 \& *.257*}{\sqrt{.295(1 \& .295) \times \left(\frac{1}{1,573} \% \frac{1}{1,495} \right)}} = 4.55$$

Since the computed value of z (4.55) is larger than 1.96, the difference between the participation rates is statistically significant. If the computed value was less than 1.96, the difference would not have been statistically significant. It is, therefore, reasonable to deduce that the observed difference in the participation rate is not attributable to chance fluctuations.

1713 Testing Differences Within the Same Sample -- Chi-Square (X^2)

A test of statistical significance can be used to determine if the characteristics of one group vary significantly from the characteristics of another. For example, this test can be used to compare the distribution of participants in one county versus another.

In testing this hypothesis, the chi-square test uses "column" and "row" groupings. Although the expected values are computed differently than in Section 1711.3 (page 80), the overall equation is computed the same way:

$$X^2 = \sum_j \left[\frac{(O \& E)^2}{E} \right]$$

where:

O = observed number of cases in each grouping; and

E = proportional number of cases expected, if no sampling variation was present, computed as follows:

$$E = \frac{\text{row total} \times \text{column total}}{\text{grand total}}$$

To determine whether the distribution of participants by activity varies between two counties, assume the following data were observed from the sample:

	Number of Sample Cases		
Type of Activity	Total	County A	County B
Total	280	160	120
Education	45	30	15
Subs. Employment	40	15	25
Unsubs. Employment	22	12	10
Public Sector Empl.	17	7	10
Job Search	55	35	20
Job Skills	54	34	20
Voc. Training	47	27	20

	Expected Values (<i>E</i>)	
	County A	County B
Education	$\frac{160 \times 45}{280} = 25.7$	$\frac{120 \times 45}{280} = 19.3$
Subs. Empl.	$\frac{160 \times 40}{280} = 22.9$	$\frac{120 \times 40}{280} = 17.1$
Unsubs. Empl	$\frac{160 \times 22}{280} = 12.6$	$\frac{120 \times 22}{280} = 9.4$
Public Sector Empl.	$\frac{160 \times 17}{280} = 9.7$	$\frac{120 \times 17}{280} = 7.3$
Job Search	$\frac{160 \times 55}{280} = 31.4$	$\frac{120 \times 55}{280} = 23.6$
Job Skills	$\frac{160 \times 54}{280} = 30.9$	$\frac{120 \times 54}{280} = 23.1$
Voc. Training	$\frac{160 \times 47}{280} = 26.9$	$\frac{120 \times 47}{280} = 20.1$

$$\chi^2 = \sum_j \left[\frac{(O - E)^2}{E} \right] = \frac{(30 - 25.7)^2}{25.7} \% + \frac{(15 - 19.3)^2}{19.3} \%$$

$$\frac{(15 - 22.9)^2}{22.9} \% + \frac{(25 - 17.1)^2}{17.1} \%$$

$$\frac{(12 \text{ \& } 12.6)^2}{12.6} \% \quad \frac{(10 \text{ \& } 9.4)^2}{9.4} \%$$

$$\frac{(7 \text{ \& } 9.7)^2}{9.7} \% \quad \frac{(10 \text{ \& } 7.3)^2}{7.3} \%$$

$$\frac{(35 \text{ \& } 31.4)^2}{31.4} \% \quad \frac{(20 \text{ \& } 23.6)^2}{23.6} \%$$

$$\frac{(34 \text{ \& } 30.9)^2}{30.9} \% \quad \frac{(20 \text{ \& } 23.1)^2}{23.1} \%$$

$$\frac{(27 \text{ \& } 26.9)^2}{26.9} \% \quad \frac{(20 \text{ \& } 20.1)^2}{20.1}$$

$$X^2 = .72 + .96 + 2.73 + 3.65 + .03 + .04 + .75 + 1.00 + .41 + .55 + 0 + 0 = 10.29$$

To determine if the computed chi-square value is significant, i.e., the concentrations of error can not be reasonably regarded as due to sampling variation, the table of Critical Chi-Square Values in Section 1713 (page 86), should be used. The appropriate number of degrees of freedom (DF) for examples of this type (with any number of rows or columns) is computed by the following equation:

$$DF = (number \text{ of rows } + 1) \times (number \text{ of columns } + 1)$$

Again, if the computed chi-square value exceeds the table value, the value is significant, i.e., participation in different activities varies from County A to County B. In this example, DF = 6. Since 10.67 does not exceed 12.6, the data is not significant at the .05 level.

Interpretation of significant data is a somewhat more complex task. Briefly, the analyst must look to the source of the greatest variation, noting whether the observed value was larger or smaller than expected. If this test had shown statistical significance, the analyst would need to further examine the subsidized employment category, where County A had a smaller than expected number of cases while County B had a greater than expected number of cases.

The restrictions on the use of this table are the same as in Section 1711.3 (page 80) -- that the test is inapplicable, i.e., serious distortions of results may appear, when 20 percent or more of the cells have expected values of less than "5" or any cell has an expected value of less than "1." Under these circumstances, rows and/or columns must be combined until the requirements are satisfied.

As indicated in Section 1711.3 (page 80), in a 2 x 2 table, each expected value must be "5" or more. (In such tables, the preferred method for computing the chi-square is by the use of the equation given in Section 1711.3.)

1720 Trends

It may be important in a State for the TANF system to have feedback on apparent changes over time for a variety of statistics (e.g., changes in caseload, in participation rates, in out-of-wedlock births, in error rates). The general direction of change in data over time is called the "trend" and can be used, for example, to assess the effectiveness of State policies or of corrective actions in reducing error rates. Throughout this section, we are using the error rate, however the methodology is applicable to other proportions. Trends can be based on moving averages of error rates or on individual monthly error rates.

1721 Moving Averages

Trends based on a moving average involve taking the averages calculated over a fixed number of months and progressively dropping data for the earliest month and adding data for the latest month. In this way, the composition of each fixed time period average remains approximately the same because any given average covers early, middle, and late months of the fixed period. Monthly aberrations are smoothed because these fixed groupings are not particularly sensitive to any given monthly rate. Thus, the long term trend can be judged visually.

For TANF purposes, a six-month moving average is recommended. Six-month moving averages can be computed on reviewed sample cases by either month of review or by month of completion (see Figures 2. and 3. below). The advantage of computing six-

month averages by month of review is that the effectiveness of corrective actions for which results are expected at a given point in time can be observed more clearly than if computed by month of completion. On the other hand, averages computed by month of completion have the advantage of timeliness, i.e., there is no delay of several months for cases to be completed before a trend can be observed. (It should be noted,

however, unless cases are completed on a more continuous flow basis than is generally true at the present time, moving averages based on month of completion can lead to spurious peaks and valleys in the data.)

Figure 2.

Six-Month Moving Averages of Completed Sample Cases
By the Month of Review

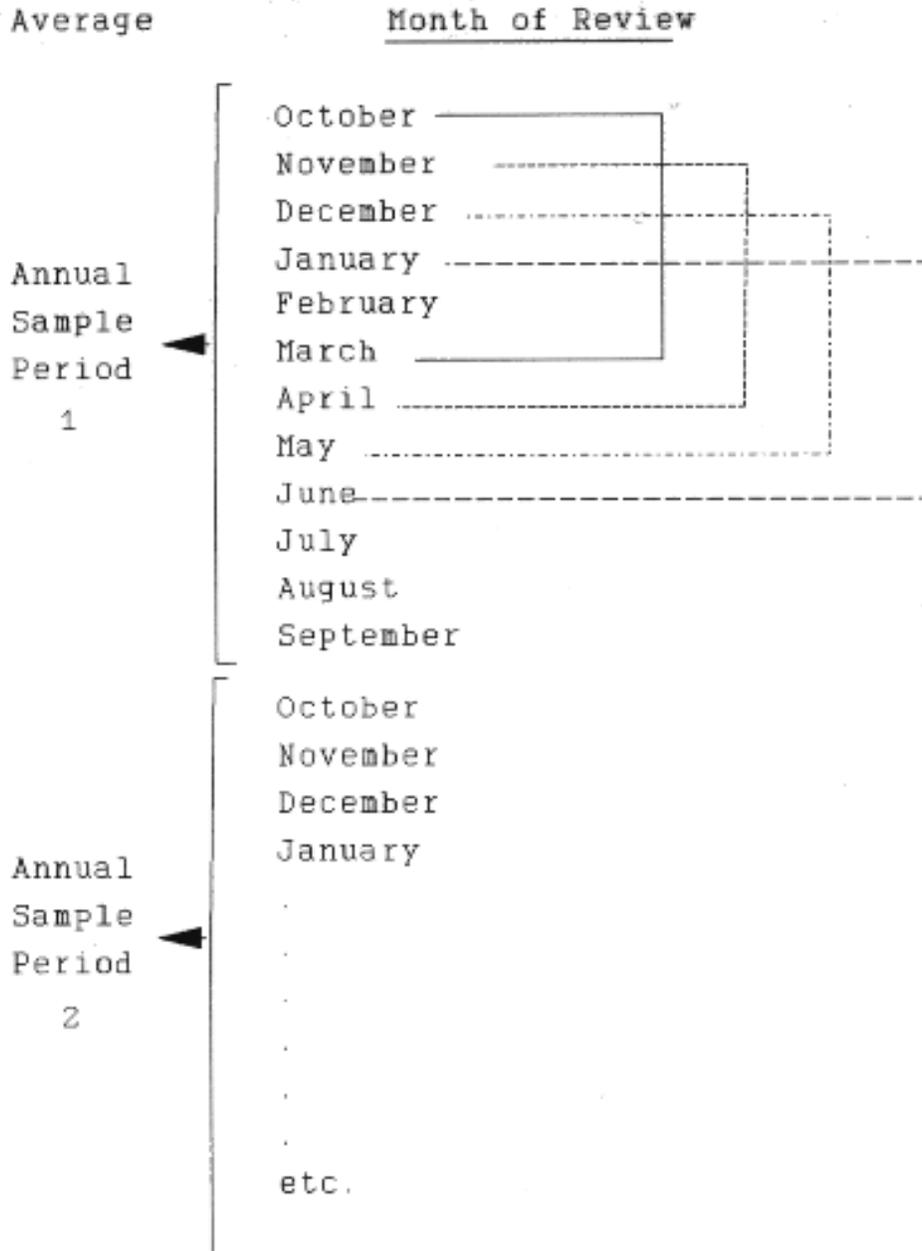
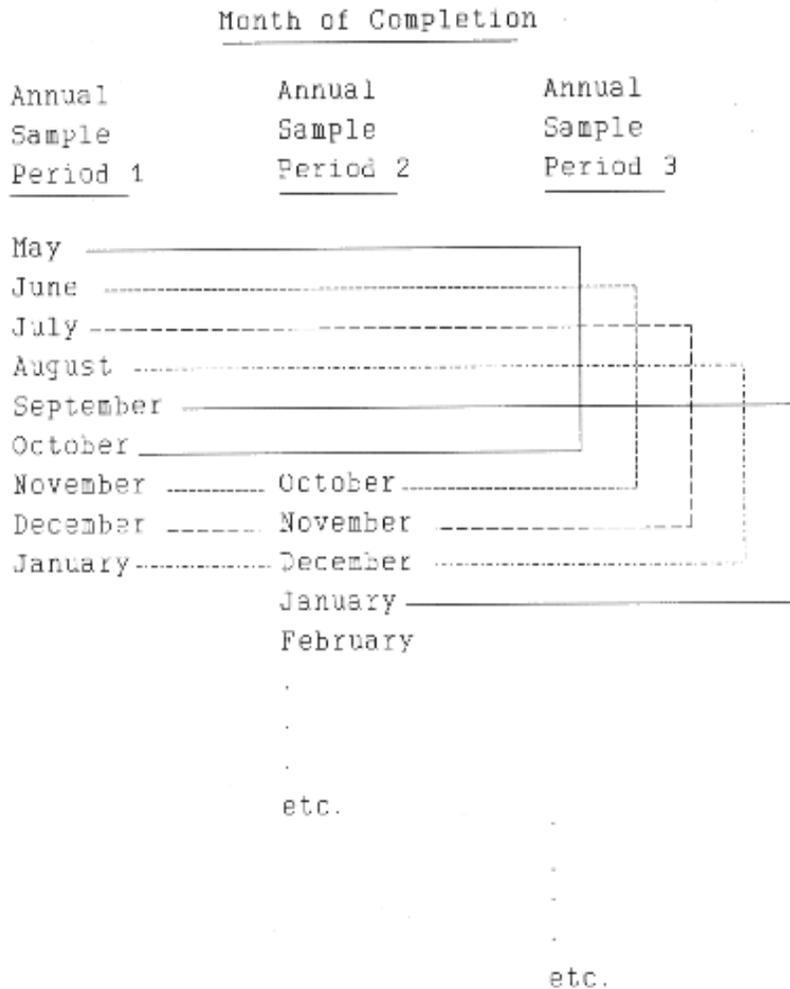


Figure 3.

Six-Month Moving Averages of Completed Sample Cases
Regardless of Month of Review



1722 Individual Monthly Rates

Individual rates are generally examined for short-term time periods. Because each month's sample is small, the monthly error rates tend to fluctuate much more than six-month moving averages. The classic way of measuring this trend is to fit a mathematical trend line, called a regression line, estimated by the method of "least squares." While a trend line could be drawn by inspection, such a line probably would be inaccurate and

would be graphed differently by different people, depending on who was drawing the line. The advantages to the regression line are: (1) the sum of squares of monthly error rate deviations from the trend line is minimized; (2) all analysts fit the same line; (3) different measures, e.g., degree of relationship, can be computed; and (4) future estimates can readily be extrapolated from the line.

1723 Computation of a Regression Line by "Least Squares" Method

It is best to fit the line after all sample cases for the annual sample period have been completed. In our example, we are using the error rate; however, the methodology is applicable to other proportions. If a regression line is to be fitted for shorter or longer periods, the overall error rate for the shorter or longer period must be used in the computation. The form of the equation used is as follows:

$$\hat{p}_m = a + bm$$

where \hat{p}_m is the estimated error rate for a given month. The equation for "b" is:

$$b = \frac{\sum n_m(p_m - p_t)(m - \bar{m})}{\sum n_m(m - \bar{m})^2}$$

where:

b = error rate change (increase or decrease) per unit month advance;

n_m = number of sample cases completed for the m^{th} month;

p_m = actual proportion of error cases in sample for the m^{th} month;

p_t = actual proportion of error cases in sample for annual sample period;

m = "1" for first month; "2" for second month; etc.; and

a, p_t , & \bar{m}

$$\bar{m} = \frac{\sum (m)(n_m)}{\sum n_m}$$

The equation for "a" (the y intercept) is:

To illustrate the "least-squares" method of fitting a trend line, data for a six-month period are used. Assume the number of sample cases completed and the case error rate for each month to be as follows:

Month	m	Number of Cases Reviewed (n_m)	Case Error Proportions(p_t)
April	1	203	.082
May	2	201	.088
June	3	197	.065
July	4	194	.049
August	5	202	.080
September	6	204	.063
Total		$\sum n_m = 1,201$	$p_t = .071$

Step 1. Compute \bar{m} :

$$\bar{m} = \frac{\sum (m)(n_m)}{\sum n_m}$$

$$\bar{m} = \frac{1(203) + 2(201) + 3(197) + 4(194) + 5(202) + 6(204)}{1,201}$$

$$\bar{m} = \frac{4,206}{1,201}$$

$$\bar{m} = 3.5$$

Step 2. Compute b:

$$b = \frac{\sum n_m (p_m \& p_t) (m \& \bar{m})}{\sum n_m (m \& \bar{m})^2}$$

Month (m)	n_m	$(p_m \& p_t)$	$(m \& \bar{m})$	$n_m(p_m \& p_t)(m \& \bar{m})$	$n_m(m \& \bar{m})^2$
1	203	(.082-.071)	(1-3.5)	-5.583	1,268.75
2	201	(.088-.071)	(2-3.5)	-5.126	452.25
3	197	(.065-.071)	(3-3.5)	.591	49.25
4	194	(.049-.071)	(4-3.5)	-2.134	48.50
5	202	(.080-.071)	(5-3.5)	2.727	454.50
6	204	(.063-.071)	(6-3.5)	-4.080	1275.00
				$\Sigma = -13.605$	$\Sigma = 3,548.25$

$$b = \frac{-13.605}{3,548.25} = -.0038 \text{ or } -.38\%$$

Step 3. Substitute and solve for "a" ("the y intercept"):

$$a + p_t + bm = (.071) + (.0038)(3.5) = .0846 \text{ or } 8.46\%$$

Step 4. Substitute the equation for the line into the general form and solve for \hat{p}_m values using $m = 6$ and $m = 0$:

$$\hat{p}_m = a + bm$$

When $m = 6$, then

$$\hat{p}_m = .0846 + .00383(6) = .0616 \text{ or } 6.16\%$$

When $m = 0$, then

$$\hat{p}_m = .0846 + .00383(0) = .0808 \text{ or } 8.08\%$$

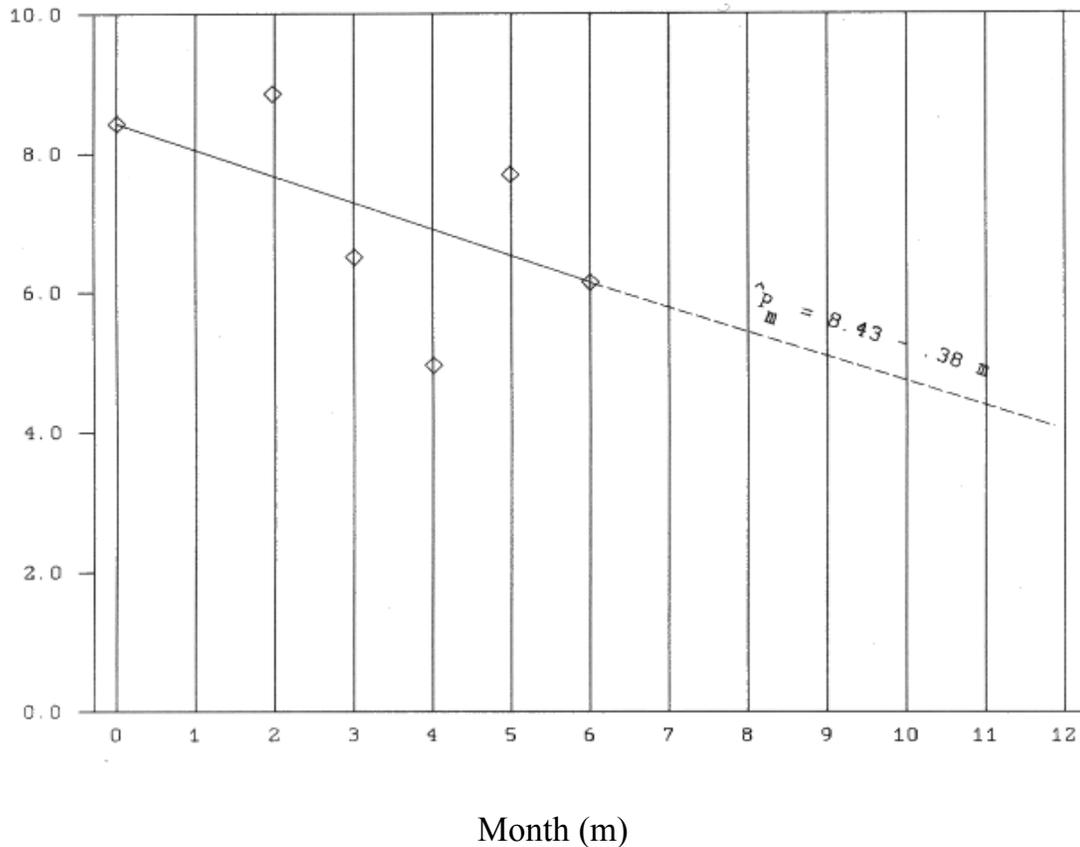
Step 5. Draw a trend line on a graph (Figure 4.) using the values of \hat{p}_t and m from step 4.

Figure 4.

Trend Line

Error Rate

(\hat{p}_m)



The graph shows an inverse relationship between month sequence and error rates, i.e., the error rates decrease as the months progress. The trend line would be more accurate if twelve months of data were used instead of six months.

Once the trend line is established, it is possible to compute from it what the estimated error rate would be each month if only the factor of trend affected the rate; in other words, what the error rate would have been if there were no unpredictable or cyclical factors affecting it.

1723.1 Practical Uses of Trend Line and Trend Values

The differences between the actual and trend values of the error rates show whether the actual values are above or below the values they would have been if only trend affected the rates. These differences may reveal the combined effect of such factors as policy changes and staff turnover on the eligibility and payment process in the TANF program.

The trend line also provides a basis for estimating probable error rates in future periods. The accuracy of such estimates will depend on the number of points used in the time series and the assumptions made regarding the future effects of unpredictable factors on the error rates. (It should be noted, however, that the line of best fit is an average line, and predicting error rates beyond the range of values used to compute the line assumes the same scattergram beyond the range.)

The regression line $p = a + bm$ discussed above is restricted to linear regression only, i.e., fitting a straight line to the data. If the scatter diagram from the data indicates non-linearity (e.g., no pattern or curvature), the model given in Section 1723 (page 94) is not applicable. Other appropriate methods or models should be considered.

1723.2 Testing Trend for Statistical Significance

Testing for a significant trend is actually a test of the null hypothesis, i.e., $b = 0$ in the equation $p = a + bm$. The test statistic used is again the chi-square test. The following equation is not in the form shown earlier for chi-square but it can be shown that this statistic is distributed as chi-square with one degree of freedom when the number of months is large. Therefore, the critical value is 3.84 (see Section 1711.3 (page 80), Critical Chi-Square (χ^2) Values).

$$\chi^2 = \frac{[\sum n_m (p_m - \bar{p})(m - \bar{m})]^2}{[\sum p_t (1 - p_t) + \sum n_m (m - \bar{m})^2]}$$

All of the terms in the equation have been previously computed for the regression line itself. Thus, substituting in the equation using the data for the example in Section 1723 (page 94):

$$\chi^2 = \frac{(-13.605)^2}{(.0712)(1 - .0712)(3,548.25)} = \frac{185.096}{234.039} = 0.789$$

Since the computed χ^2 value (0.791) is less than 3.84, the trend is not statistically significant.

Note that in this example, there are only 6 months available. This may not be large enough to ensure the satisfactory use of the chi-square test. The example is used only to illustrate the computation. Basing predictions on a linear fit that is not statistically significant is highly questionable.

1723.3 Relationship Between Time Sequence and Error Rates

In comparing the error rates over the months of the sample period, it is frequently desirable to measure the degree of relationship. One way of looking at this relationship is to determine how similar or the closeness of the relationship between the error rates and time.

The statistic usually used to determine the mutual relationship between two variables is called the coefficient of correlation (r). It ranges from +1 to -1. If a perfect relationship exists as rates rise over the period, the coefficient of correlation equals +1. If a perfect relationship exists as rates decline over the period, the coefficient equals -1. If no relationship exists, the computed value equals zero. Rarely are there situations where $r = \pm 1$.

The following equation is used to compute the coefficient of linear correlation:

$$r = b \sqrt{\frac{\sum n_m (m - \bar{m})^2}{\sum n_m (p_m - \bar{p})^2}}$$

The only term that has not been computed for our example in Section 1723 (page 94) is $\sum n_m (p_m - \bar{p})^2$. This computation is as follows:

Month (m)	n_m	$(p_m - \bar{p})$	$n_m(p_m - \bar{p})^2$
1	203	(.082 - .071)	.025

Month (m)	n_m	$(p_m \& p_t)$	$n_m(p_m \& p_t)^2$
2	201	(.088 - .071)	.058
3	197	(.065 - .071)	.007
4	194	(.049 - .071)	.094
5	202	(.080 - .071)	.016
6	204	(.063 - .071)	.013
			= .213

Substituting all the computed terms in the above formula, the coefficient of correlation is:

$$r = .0038 \sqrt{\frac{3,548.25}{.213}} = .49$$

Thus, the degree of relationship on the scale of -1 to +1 is -0.49.

It should be emphasized at this point, that there is no direct or proportional comparison between different values of r . For example, when the coefficient of correlation (r) between two variables is +0.8, it does not mean that the association is twice as good as that shown by a value of $r = +0.4$.

Assume that in our example, the State wants to know how much of the variation in the error rate is associated with or explained by the time sequence. A simple method of measuring this explained variation in terms of a percentage of the total variation has been developed through the use of the coefficient of determination (r^2):

$$\text{Coefficient of determination} = 100 \cdot r^2$$

(explained variation)

From this formula, the percentage of unexplained variation can also be calculated:

$$\text{Unexplained variation} = 100 (1 - r^2)$$

In our example, the coefficient of correlation was -0.49. Therefore, only 24 percent, or $(100)(0.49)^2$, of the total variation in error rates is accounted for by the time sequence. Conversely, it can be determined that the time sequence fails to account for 76 percent of the total variation in error rates, or $(100)(1 - 0.49^2)$. Obviously, other factors play a more important role in the decrease in error rates and must be brought into the analysis.

As noted in Section 1723.2, (page 99), since in this example the regression line is not statistically significant, neither the coefficient of correlation nor the coefficient of determination is statistically significant. The example only serves to illustrate the computations. It should be recognized that when r is based on a sample, it is subject to chance variation, just as is any other statistic based on a sample. Thus, before assuming a strong or weak correlation, consideration should be given not only to the value of r , but also to the size of the sample. Furthermore, sample correlation analysis has some basic limitations. A common-sense approach is needed to tell whether two variables (in this example, error rates and time) are, in fact, casually related or the apparent relationship is just a coincidence.

1730 Statistical Procedures for Developing Profiles of Error-Prone Cases

The purpose for developing profiles of error-prone or high risk cases or characteristics is to facilitate the identification of those particular types of cases or characteristics that should be singled out for special consideration, review, or treatment. For example, cases with a particular combination of factors might be redetermined for eligibility more frequently than other cases; particular elements might require more verification; or cases more likely to be in error might be emphasized in training.

In determining the kind of statistical method to be used in developing error-prone profiles, a State should consider sample size, whether the error rate is high or low, and whether it wants the profile to have limited or broad error-prone groups. Resource demands and statistical availability should also be considered. Demands upon State resources will vary with the procedure selected.

Various statistical procedures are used in analyzing and predicting the risk and the expected amount of error of cases possessing a specific type of error. One predictive technique used with quantitative or numerical data is called multiple regression. Another technique, known as discriminant analysis, uses multivariate quantitative information.

Multiple regression techniques can be used to predict the expected dollars in error in cases possessing certain characteristics. Corrective action can then be focused on cases possessing characteristics associated with the highest average dollars in error. Discriminant analysis can be used to determine the likelihood of a case being in error.

This predictive technique tries to define a functional relationship for assigning certain types of cases to various groups.

Most of the procedures that have been used in the TANF program establish specific characteristics from the sample by which a case is determined to belong to a certain group. They are generally case-driven procedures that take one of two approaches. Either a search is conducted for characteristic combinations that have a high concentration of case errors or a procedure is developed to rank cases from most error-prone to least error-prone. (It should not be too difficult to make these procedures dollar-driven. In the former procedure, the search criteria can become a high concentration of dollar errors. In the latter, the definition of error can be modified so that most error-prone implies most prone to high dollar error. This might be accomplished by defining an error case as one in which (1) the amount in error exceeds a certain amount, such as the median amount of error; or (2) the percent of the amount in error exceeds a certain percentage, perhaps of the total payment. Techniques of regression analysis would be well suited for developing a procedure that predicts the amount in error for a given case.)

All procedures used in the TANF program are based on a prior quality control sample. If the conditions under which the sample was reviewed remain constant, the sample can be used to predict cases most likely to contain errors. However, if these conditions change, so must the procedures.

1731 Criteria for Setting Up Error-Prone Profile Models

Cases selected and reviewed as error-prone should have the highest likelihood of being in error and should produce the highest cost savings to a State. The error-prone model should meet the following specifications:

13. Cases are ranked by error proneness so that resources are expended more efficiently;
14. Screening models are easy to use so that extensive time is not required to train supervisors;
15. Criteria used are quick to apply so that extensive time is not needed to identify error-prone characteristics in the case file;
16. Models can be incorporated into the existing case processing system;
17. Models include a monitoring component that informs the agency of success rates;

18. System is easily updated so that staff can adjust the model to reflect changes in caseload; and
19. System is cost-effective and feasible.

APPENDICES

APPENDIX A

Table of Random Numbers

A table of random numbers is a compilation of numbers whose frequency and sequence of occurrence have been determined by chance. Since the position that any digit occupies is a result of chance, any number formed by a combination of these digits, in any sequence, by any progression, systematic or random, in any direction from any starting point, may be regarded as a random grouping or selection.

The only requirement is that all of the items from which a random selection is to be made have, or were assigned, individual identifying numbers. The entire group of numbered items may be regarded, for certain purposes, as a statistical population. A selection of any part of that statistical population by means of a table of random numbers may be regarded as a random sample of the population.

For example, if the population to be sampled consists of 84 cases, numbered from 1 through 84, random numbers of two digits are required. If the population to be sampled consists of 796 cases, random numbers of three digits are required. To obtain a two-digit, three-digit, seven digit or other size number from the table, combine adjacent digits as needed. It makes no difference where in the table one begins or in which direction one moves in selecting random numbers. However, each time the table is used, select a different starting point.

Example: If the highest consecutively numbered case in the population is 7,543, assume that a randomly selected location starts with the four digits in line 49, column 1. Assume also that it is decided in advance that the numbers to be used in drawing the sample will be consecutive numbers obtained by reading across the columns from left to right on each consecutive line in the table until a sample of the desired size has been accumulated. If the first four digits of each number in each five-digit column are used, the sample would consist of cases identified as 6837, 7076, 1059, 0454, 5432, 0234, 1724, 2886, 1477, 6273, 1566, and so on until the desired sample size is obtained. The numbers 9501, 9352, 7646, 9227, as well as any other number larger than 7,543 that may later be encountered are not usable for this universe and are, therefore, rejected.

Table of Random Sampling Numbers

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APPENDIX B

Definitions

Note: The definitions listed below pertain to this manual only.

20. Absolute Value - disregards the sign of a number; considers all numbers positive.
21. ACF - the Administration for Children and Families.
22. Act - Social Security Act
23. Adequate Sample - pertains most commonly to the size of a sample; a sample is adequate if its size is large enough to give the degree of precision or reliability required in a given sample estimate.
24. Adjusted State Family Assistance Grant, or Adjusted SFAG - the SFAG amount, minus any reductions for Tribal Family Assistance Grants paid to Tribal grantees on behalf of Indian families residing in the State and any transfers to the Social Services Block Grant or the Child Care and Development Block Grant.
25. Administrative Costs has the meaning specified at §263.01(b) of the final rule.
26. Adult - An individual who is not a minor child (See Section 419 of Act.)
27. AFDC - Aid to Families with Dependent Children.
28. Aid to Families with Dependent Children - the welfare program in effect under title IV-A of prior law.
29. Alpha - the allowable probability associated with observed differences attributed to chance. If the probability associated with sample differences is less than alpha, we can reasonably conclude that a real difference between samples exists (see Risk).
30. Annual Sample Period - (also called Fiscal Year) - The 12-month period, October 1 through September 30.
31. Annual Work Participation Rate - the overall (or two-parent) work participation rate for a fiscal year is the average of the State's overall (or two-parent) work participation rates for each month in the fiscal year.

32. Application - The action by which an individual indicates in writing to the agency administering the State TANF program (or separate State program) his/her desire to receive assistance.

33. Assistance - The term "assistance" includes cash, payments, vouchers, and other forms of benefits designed to meet a family's ongoing basic needs (i.e., for food, clothing, shelter, utilities, household goods, personal care items, and general incidental expenses). It includes such benefits even when they are provided in the form of payments by a TANF agency, or other agency on its behalf, to individual recipients and conditioned on their participation in work experience, community service, or other work activities (See §261.30 of final rule).

The term "assistance" excludes:

- a. Nonrecurrent, short-term benefits (such as payments for rent deposits or appliance repairs) that:
 - 1) Are designed to deal with a specific crisis situation or episode of need;
 - 2) Are not intended to meet recurrent or ongoing needs; and
 - 3) Will not extend beyond four months.
- b. Work subsidies (i.e., payments to employers or third parties to help cover the costs of employee wages, benefits, supervision, and training);
- c. Supportive services such as child care and transportation provided to families who are employed;
- d. Refundable earned income tax credits;

- e. Contributions to, and distributions from, Individual Development Accounts;
- f. Services such as counseling, case management, peer support, child care information and referral, transitional services, job retention, job advancement, and other employment-related services that do not provide basic income support; and

- g. Transportation benefits provided under an Access to Jobs or Reverse Commute project, pursuant to section 404(k) of the Act, to an individual who is not otherwise receiving assistance. The exclusion of nonrecurrent, short-term benefits under (1) of this paragraph also covers supportive services for recently employed families, for temporary periods of unemployment, in order to enable continuity in their service arrangements.

34. Basic MOE means the expenditure of State funds that must be made in order to meet the MOE requirement at section 409(a)(7) of the Act

35. Bias - systematic error, leading to distortion in one direction of a statistical result; distinct from random error, where distortion in both directions may be largely self-canceling.

36. Caseload - is comprised of the members of the "target" population. For example, the State's TANF caseload is the families (cases) receiving assistance under the State TANF Program. The caseload size is the number of such families.

37. Cash assistance - when provided to participants in the Welfare-to-Work program (WtW), has the meaning specified at §260.32.

38. CCDBG - means the Child Care and Development Block Grant Act of 1990, as amended, 42 U.S.C. 9858 et. seq.

39. CCDF - means the Child Care and Development Fund, or those child care programs and services funded either under section 418(a) of the Act or CCDBG.

40. Child - (also called Minor Child) An individual who has not attained 18 years of age; or has not attained 19 years of age and is a full time student in a secondary school (or in the equivalent level of vocational or technical training).

41. Child Care/ Family Care Services - Services that assist an individual in meeting his/her family care needs during participation. Family care ranges from day care inside or outside the home to after school programs inside or outside the home. It usually includes supervision and shelter. It may also include meals and transportation.

42. Closed Case (TANF) - A case (family) whose assistance under the State TANF Program was terminated for the reporting month (does not include families whose assistance was temporarily suspended), but received assistance under the State's TANF Program in the prior month. Thus,

TANF eligible families that are transferred to a separate State program for the reporting month are considered closed cases for reporting purposes in the State TANF Program.

43. Closed Case (State MOE) - A case (family) whose assistance under the separate State program was terminated for the reporting month (does not include families whose assistance was temporarily suspended), but received assistance under the separate State program in the prior month. Thus, TANF eligible families that are transferred to a State TANF Program from a separate State programs for the reporting month are considered closed cases for reporting purposes in the separate State program.

44. Commingled State TANF Expenditures - means expenditures of State funds that are made within the TANF program and commingled with Federal TANF funds.

45. Completed Case - A case for which the State (or Tribe) collects all required disaggregated data and reports the information to DHHS.

46. Complete and Accurate Report for Disaggregated Data - a report that --
a. The reported data accurately reflect information available to the State in its case records, financial records, and automated data systems;

- b. The data are free from computational errors and are internally consistent (e.g., items that should add to totals do so);
- c. The data are reported for all elements (i.e., no data are missing);
- d.1) The data are provided for all families; or
- 2) If the State opts to use sampling, for all families selected in a sample that meets the specifications and procedures in the TANF Sampling Manual for minimum sample size requirements (except for families listed-in-error); and
- e. Where estimates are required (e.g., some types of assistance may require cost estimates), the State uses reasonable methods to develop these estimates.

47. Complete and Accurate Report for Aggregated Data - a report that --

- a. The reported data accurately reflect information available to the State in its case records, financial records, and automated data systems;
- b. The data are free from computational errors and are internally consistent (e.g., items that should add to totals do so);
- c. The data are reported for all applicable elements; and
- d. Monthly totals are unduplicated counts for all families (e.g., the number of families and the number of out-of-wedlock births are unduplicated counts).

48. Complete and Accurate Report for the TANF Financial Data - a report that --

- a. The reported data accurately reflect information available to the State in its case records, financial records, and automated data systems;

- b. The data are free from computational errors and are internally consistent (e.g., items that should add to totals do so);
- c. The data are reported for all applicable elements; and;
- d. All expenditures have been made in accordance with §92.20(a) of the Code of Federal Regulations.

49. Confidence Interval - the interval between two sample values, known as confidence limits, within which it may be asserted with a specified degree of confidence that the true population value lies.

50. Confidence Limits - the values that form the upper and lower limits of the confidence interval.

51. Contingency Fund - means Federal TANF funds available under section 403(b) of the Act, and Contingency Funds means the Federal monies made available to States under that section. Neither term includes any State funds expended pursuant to section 403(b).

52. Contingency Fund MOE - means the MOE expenditures that a State must make in order to meet the MOE requirements at sections 403(b)(6) and 409(a)(10) of the Act and subpart B of part 264 of the regulations and to retain the contingency funds made available to the State. The only expenditures that qualify for Contingency Fund MOE are State TANF expenditures.

53. Control group is a term relevant to continuation of a "waiver" and has the meaning specified at §260.71.

54. Countable State expenditures has the meaning specified at §264.0.

55. DHHS - U.S. Department of Health and Human Services

56. Discretionary Fund of the CCDF refers to child care funds appropriated under the CCDBG.

57. Disposed of Case - A case (family) for which the data was collected and reported to DHHS or the case was reported as dropped, listed-in-error.

58. Disabled Individual - An individual who has a physical or mental impairment that substantially limits one or more of the major life activities of such an individual, who has a record of such impairment, or who is regarded as having such an impairment.

59. DV Waiver (or Federally recognized good cause domestic violence waiver) has the meaning specified in §260.51.

60. EA - Emergency Assistance.

61. Earned Income - Income in cash or in-kind earned by an individual through the receipt of wages, salary, commissions or profit from activities in which he/she is engaged as a self-employed individual or as an employee.

62. Earned Income Credit (EIC) - A refundable tax credit for families with dependent children. EIC payments are received either monthly (as advance payment through the employer), annually (as a refund from IRS), or both.

63. Eligible State - means a State that, during the 27-month period ending with the close of the first quarter of the fiscal year, has submitted a TANF plan that we have determined is complete.

64. Emergency Assistance - the program option available to States under sections 403(a)(5) and 406(e) of prior law to provide short-term assistance to needy families with children.

65. Employed - An individual who is currently a paid employee; works in his/her own business, profession, or farm; works 15 hours or more per week as an unpaid worker in an enterprise operated by a member of the family; or is one who is not working, but has a job or business from which he/she is temporarily absent because of illness, bad weather, vacation, labor-management dispute, or personal reasons, whether or not paid by the employer for time off and whether or not seeking another job. Employed also includes active duty military.

66. Equal Probability of Selection - selection of a sample where every case has an independent and equal chance of inclusion in the sample (also called self-weighted sample).

67. Expenditure means any amount of Federal TANF or State MOE funds that a State expends, spends, pays out, or disburses consistent with the requirements of parts 260 through 265 of the regulations. It may include expenditures on the refundable portions of State or local tax credits, if they are consistent with the provisions at §260.33. It does not include any amounts that merely represent avoided costs or foregone revenue. Avoided costs include such items as contractor penalty payments for poor performance and purchase price discounts, rebates, and credits that a State receives. Foregone revenue includes State tax provisions -- such as waivers, deductions, exemptions, or nonrefundable tax credits -- that reduce a State's tax revenue.

68. Experimental group is a term relevant to continuation of a "waiver" and has the meaning specified at §260.71.

69. Family Violence Option (or FVO) has the meaning specified at §260.51.

70. FAMIS - Family Assistance Management Information System - the automated statewide management information system under sections 402(a)(30), 402(e), and 403 of prior law.

71. Federal Expenditures - expenditures by a State of Federal TANF funds.

72. Federal TANF Funds - means all funds provided to the State under section

403 of the Act, including WtW funds awarded under section 403(a)(5). The term includes the SFAG, any bonuses, supplemental grants, or contingency funds.

73. Federally recognized good cause domestic violence waiver has the meaning specified at §260.51.

74. Fiscal Year - (also called Annual Sample Period) - The 12-month period, October 1 through September 30.

75. Frame - the list of cases from which the sample is actually selected; also known as the sample selection list.

76. FY - fiscal year.

77. Good cause domestic violence waiver has the meaning specified at §260.51.

78. Governor - the Chief Executive Officer of the State. It thus includes the Governor of each of the 50 States and the Territories and the Mayor of the District of Columbia.

79. Housing Assistance - Services that assist individuals in maintaining or obtaining adequate shelter for themselves and their families while they are receiving employment, training or other supportive services.

80. IEVS - the Income and Eligibility Verification System operated pursuant to the provisions in section 1137 of the Act.

81. Inconsistent is a term relevant to continuation of a "waiver" and has the meaning specified at §260.71.

82. Indian Tribe - has the meaning given such terms by section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 450b), except that the term "Indian tribe" means, with respect to the State of Alaska, only the Metlakatla Indian Community of the Annette Islands Reserve and the following Alaska Native regional nonprofit corporations:

- a. Arctic Slope Native Association;
- b. Kawerak, Inc.;
- c. Maniilaq Association;
- d. Association of Village Council Presidents;
- e. Tanana Chiefs Council;
- f. Cook Inlet Tribal Council;
- g. Bristol Bay Native Association;
- h. Aleutian and Pribilof Island Association;
- i. Chugachmuit;
- j. Tlingit Haida Central Council;
- k. Kodiak Area Native Association; and
- l. Copper River Native Association.

83. Individual Development Accounts has the meaning specified at §263.20 of the Act.

84. Job Opportunities and Basic Skills Training Program - the program under title IV-F of prior law to provide education, training and employment services to welfare recipients.

85. JOBS - the Job Opportunities and Basic Skills Training Program.

86. Listed-in-error - cases included in the sample selection list that are not included in the population of interest.

87. Mean - a measure of the central tendency of data. The sum of the values divided by the number of values.

88. Medical Assistance - Medical assistance services received by an individual under the State plan approved under title XIX of the Social Security Act.

89. Minor Child - An individual who has not attained 18 years of age; or has not attained 19 years of age and is a full time student in a secondary school or in the equivalent level of vocational or technical training.

90. MOE - maintenance-of-effort.

91. Needy State - is a term that pertains to the provisions regarding the Contingency Fund and the penalty for failure to meet participation rates. It means, for a month, a State where:

- a. 1) The average rate of total unemployment (seasonally adjusted) for the most recent 3-month period for which data are published for all States equals or exceeds 6.5 percent; and
- 2) The average rate of total unemployment (seasonally adjusted) for such 3-month period equals or exceeds 110 percent of the average rate for either

(or both) of the corresponding 3-month periods in the two preceding calendar years; or

b. The Secretary of Agriculture has determined that the average number of individuals participating in the Food Stamp program in the State has grown at least 10 percent in the most recent 3-month period for which data are available.

92. Noncustodial Parent - as used here, means a parent of a minor child who: (1) lives in the State and (2) does not live in the same household as the minor child.

93. Non-Sampling Error - the error or deviation from the true population value in sample estimates that cannot be attributed to chance sampling variations.

Examples are errors resulting from imperfections in the selection of sample units, bias in the estimating procedure used, mistakes in arithmetical calculations, inconsistent review procedures, etc.

94. Normal Distribution - a symmetrical, bell shaped curve that describes the sampling distribution of many common sample statistics. While the sampling distributions of proportions and ratios as used in TANF are more correctly described by the binomial distribution, they are often closely approximated by the normal distribution, and it is common practice to use the normal distribution for this purpose. The normal distribution provides the theoretical basis for the determination of confidence limits, for

the specification of particular levels or degrees of confidence involved in making sample estimates, and in evaluating sampling error.

95. Not in Labor Force - An individual who is classified as neither employed nor unemployed.

96. Oversampling - selecting more sample cases than required.

97. Overall Monthly Work Participation Rate - (also known as All Families Work Participation Rate) - The State's overall participation rate for a month is defined as follows:

a. The number of families receiving TANF assistance that include an adult or a minor head-of-household who is engaged in work for the month (the numerator), divided by

b. The number of families receiving TANF assistance during the month that include an adult or a minor head-of-household minus the number of families that are subject to a penalty for refusing to work in that month (the denominator). However, if a family has been sanctioned for more than three of the last 12 months, we will not deduct it from the denominator. A State has the option of not requiring a single custodial parent caring for a child under age one to engage in work. If the State adopts this option, it may disregard such a family in the participation rate calculation for a maximum of 12 months.

98. Parameter - a value, property, or characteristic of a population, which can normally be estimated from a sample. Examples are a mean, proportion or percentage, total, range, or standard deviation of a population.

99. Population of Interest - those units about which we wish to form conclusions from which a sample is selected and estimates made.

100. Precision - see definition for Reliability. The degree to which a sample estimate approximates the value obtained from a complete count of all units using the same methods.

101. Prior law - means the provisions of title IV-A and IV-F of the Social Security Act in effect as of August 21, 1996. They include provisions related to Aid to Families with Dependent Children (or AFDC), Emergency Assistance (or EA), Job Opportunities and Basic Skills Training (or JOBS), and Family Assistance Management Information System (FAMIS).

102. Probability - relative frequency of occurrence; the probability of an event is the relative frequency of occurrence of the event in an indefinitely large number of observations.

103. Probability Sampling - any method of sample selection that is based on the theory of probability. Probability sampling, which requires that at any stage of selection the probability of any

unit or set of units being selected must be known, is the only general method of sampling that makes it possible to obtain a mathematical measure of the precision of the sample estimate. The term "random sampling" is used in the sense of probability sampling.

104. PRWORA - the Personal Responsibility and Work Opportunity Reconciliation Act of 1996, or Public Law 104-193.

105. Qualified Aliens has the meaning prescribed under section 431 of PRWORA, as amended, 8 U.S.C. 1641.

106. Qualified State Expenditures - means the total amount of State funds expended during the fiscal year that count for basic MOE purposes. It includes expenditures, under any State program, for any of the following with respect to eligible families:

- a. Cash assistance;
- b. Child care assistance;
- c. Educational activities designed to increase self-sufficiency, job training, and work, excluding any expenditure for public education in the State except expenditures involving the provision of services or assistance of an eligible family that is not generally available to persons who are not members of an eligible family;
- d. Any other use of funds allowable under subpart A of part 263 of the regulations; and
- e. Administrative costs in connection with the matters described in paragraphs

(1), (2), (3) and (4) of this definition, but only to the extent that such costs do not exceed 15 percent of the total amount of qualified State expenditures for the fiscal year.

107. Random Numbers - series of digits, each occurring independently of each other. Each digit tends to appear as many times as any other, in any progression, if the series selected is large.

108. Random Sampling - the process of selecting a sample from a population so that every unit in the population has a known chance of being included in the sample.

109. Random Start - in selecting a systematic sample at intervals of some specified number of items in an ordered frame, it is mandatory to select the first item completely without bias. Such selection is then said to have given the sample "a random start."

110. Range - the largest minus the smallest of a group of values.

111. Reliability See definition of Precision - the uniformity of sample results when obtained from repeated samples of the same size and type from the sample population; the degree to which a sample estimate approximates the value obtained from a complete count of all units using the same methods.

112. Reporting Month - the specific calendar or fiscal month for which data is being collected. The reporting month and the sample month are always the same month.

113. Risk - as used here, refers to the degree of risk associated with given degrees of confidence. For example, if a statement is made "with 95 percent confidence" that the true population parameter lies within a specified interval, there is a "5 percent risk" that the parameter actually lies outside that interval (also called alpha).

114. Sample - part of a population; a limited or finite number of items selected from a population, by a prescribed procedure, with the objective of estimating certain values (mean, total proportion, etc.) of the parent population, or of testing the validity of certain assumptions or hypotheses with respect to particular properties of the population.

115. Sample Interval - in systematic sampling, the number of cases between two consecutive selections on the sampling frame.

116. Sample Month - the specific calendar or fiscal month for which the sample is selected. The sample month and the reporting month are always the same month.

117. Sample Period - the 12 month period October 1 through September 30.

118. Sample Selection List - the list of cases from which the sample is actually selected; also known as the sample frame.

119. Sample Size - the number of items in the sample.

120. Sampling Distribution - the distribution of a (sample) statistic, such as a sample mean or a sample proportion or percentage, that would be formed by obtaining such statistics from all possible samples of a given fixed size selected by some specified sampling procedure; a population of all possible sample values of the statistic under consideration.

121. Sampling Error - that part of the difference between a population value, and an estimate of that value obtained from a random sample, which is due solely to the fact that only a sample of values is observed; to be distinguished from non-sampling error which is due to biased or imperfect sample selection, or real differences due to changes over time, error of observation, recording, calculation, etc.

122. Scientifically Acceptable Sampling Method - a probability sampling method in which every sampling unit from the population has a known, non-zero chance to be included in the sample, and the sample size requirements are met.

123. Secretary - Secretary of the Department of Health and Human Services or any other Department official

duly authorized to act on the Secretary's behalf.

124. Segregated State TANF Expenditures - means expenditures of State funds within the TANF program that are not commingled with Federal TANF funds.

125. Separate State Program - means a program operated outside of TANF in which the expenditures of State funds may count for basic MOE purposes.

126. SFAG - State Family Assistance Grant.

127. SFAG Payable - means the SFAG amount, reduced, as appropriate, for any Tribal Family Assistance Grants made on behalf of Indian families residing in the State and any penalties imposed on a State.

128. Significant Difference - a difference is statistically significant if it can be concluded from a sample, with a given degree of risk, that the difference actually exists in the universe. A difference observed in a sample is judged not statistically significant if it could easily have occurred purely as a result of random sampling variations.

129. Simple Random Sample - a probability sample selected in such a way that each unit of the frame has an equal and independent chance of being included in the sample; for samples of any given size, all possible combinations

of units that could form samples of that size must have the same probability of selection (usually uses random digits for item selection).

130. Single audit - means an audit or supplementary review conducted under the authority of the Single Audit Act at 31 U.S.C. chapter 75.

131. Social Services Block Grant means the social services program operated under title XX of the Act, pursuant to 42 U.S.C. 1397.

132. SSBG means the Social Services Block Grant.

133. Standard Deviation - the most widely used measure of the dispersion (scatter or variability) of frequency distributions from their arithmetic means. The standard deviation of the sampling distribution of any given statistic is also known as the "standard error" of that statistic.

134. Standard Error - the standard deviation of the sampling distribution of a given statistic; used in measuring precision of an estimate.

135. State - the 50 States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, and American Samoa, unless otherwise specified.

136. State agency - means the agency that the Governor certifies as the administering and supervising agency for the TANF program, pursuant to section 402(a)(4) of the Act.

137. State Family Assistance Grant - means the amount of the basic block grant allocated to each eligible State under the formula at section 403(a)(1) of the Act.

138. State MOE Expenditures - means the expenditure of State funds that may count for purposes of the basic MOE requirements at section 409(a)(7) of the Act and the Contingency Fund MOE requirements at sections 403(b)(4) and 409(a)(10) of the Act.

139. State MOE Family - For reporting purposes only, the State MOE family is the eligible family receiving assistance plus the following persons living in the household if they are not already in the eligible family receiving assistance:

- a. a parent or caretaker relative of any minor child in the eligible family receiving assistance,
- b. a minor sibling of any child in the eligible family receiving assistance, and
- c. any person whose income or resources are counted in determining the eligibility for or the amount of the assistance for the eligible family.

140. State TANF Expenditures - means the expenditure of State funds within the TANF program.

141. Stratified Random Sampling - random sampling of a population that has been divided in a number of sub-populations according to some predetermined criterion (geographic location, characteristic, etc.). The percentage size of each sample must be equal or have individual weighting factors taken into account before the sub-population sample results can be combined.

142. Stratum - a segment of the population for which separate estimates are computed for some special reason. All strata must be combined if an estimate of the total population is to be made.

143. Subsidized Child Care - A benefit provided by the government to a parent to support, in part or whole, the cost of child care services provided by an eligible provider to an eligible child.

144. Subsidized Housing - Money paid by the government or through a private social service agency to the family or to the owner of the housing to assist the family in paying rent.

145. Supplemental Case - a case added to the caseload for the review month after the regular sample frame, (i.e., the payroll listing or master file listing) has been compiled for the monthly sample selection.

146. Suspended Case - a formalized agency action that results in no

assistance provided to the family for one or more months without removing the family from the eligible rolls.

147. Systematic Sample - a sample attained by selecting from a file, list or computer tape, individual items at equally spaced intervals (as every 10th, 140th, 850th, etc. item, as required to obtain a total sample of a given size), with the starting point within the first such interval being determined by random selection.

148. TANF - Temporary Assistance for Needy Families.

149. TANF Family - For reporting purposes only, the TANF family is the eligible family receiving assistance plus the following persons living in the household if they are not already in the eligible family receiving assistance:
a. a parent or caretaker relative of any minor child in the eligible family receiving assistance,
b. a minor sibling of any child in the eligible family receiving assistance, and
c. any person whose income or resources are counted in determining the eligibility for or the amount of assistance of the eligible family.

150. TANF Funds - all funds provided to the State under section 403 of the Act, including the SFAG, any bonuses, supplemental grants, or contingency funds, except Welfare to Work funds.

151. TANF MOE - the expenditure of State funds that must be made in order to meet the MOE requirement at section 409(a)(7) of the Act.

152. TANF Program - a State program of family assistance operated by an "eligible State" under its State TANF plan.

153. Teen Parent - A teen parent is a person who is under 20 years of age and whose child is also a member of the TANF family.

154. Territories - the Commonwealth of Puerto Rico, the United States Virgin Islands, Guam, and American Samoa.

155. Title IV-A - refers to the title and part of the Act that now includes TANF, but previously included AFDC and EA. For the purpose of the TANF program regulations, this term does not include child care programs authorized and funded under section 418 of the Act, or their predecessors, unless we specify otherwise.

156. Tolerance - the proportion of error that has been determined to be acceptable.

157. Transportation - Services that ensure mobility between home and the location of employment, training, or other supportive services.

158. Tribal Family Assistance Grant - means a grant paid to a Tribe that has an

approved Tribal family assistance plan under section 412(a)(1) of the Act.

159. Tribal grantee means a Tribe that receives Federal TANF funds to operate a Tribal TANF program under section 412(a) of the Act.

160. Tribal TANF program - means a TANF program developed by an eligible Tribe, Tribal organization, or consortium and approved by us under section 412 of the Act.

161. Tribe - means Indian Tribe or Tribal organization, as defined elsewhere in this section. The definition may include Tribal consortia (i.e., groups of federally recognized Tribes or Alaska Native entities that have banded together in a formal arrangement to develop and administer a Tribal TANF program).

162. Two-Parent Monthly Work Participation Rate - The two-parent participation rate for a fiscal year is the average of the State's two-parent participation rate for each month in the fiscal year. We determine a State's two-parent participation rate for a month as follows:

- a. The number of two-parent families receiving TANF assistance in which the adults or minor child head-of-household and other parent meet the requirements set forth in §261.32 for the month (the numerator), divided by
- b. The number of two-parent families receiving TANF assistance during the month minus the number of two-parent

families`that are subject to a penalty for refusing to work in that month (the denominator). However, if a family has been sanctioned for more than three of the last 12 months, we will not deduct it from the denominator.

163.Unemployed - An individual who is not employed, who is available for work, and who has made specific efforts to find a job within the prior four weeks.

Included as unemployed are those who are not working, are available for work, and are waiting to be called back to a job from which they were laid off.

164.Unearned Income - Cash payment or in-kind contributions or benefits from government agencies, private organizations or individuals.

165.Victim of domestic violence has the meaning specified at §260.51.

166.Waiver - has the meaning specified at §260.71. (It is distinguished from the domestic violence waiver.)

167.Welfare-to-Work - means the program for funding work activities at section 403(a)(5) of the Act.

168.WtW - Welfare-to-Work.

169.WtW cash assistance has the meaning specified at §260.32.

APPENDIX C

Standard Error of Percentages Based on Selected Sample Sizes

The following table provides a quick reference of the standard error of percentages of case error rates obtained from a specified sample size. For example, if a simple random sample of 800 cases is found to have 80 errors, the case error rate would be 10 percent and the standard error would be 1.1 percent.

The entries in the table are estimated by the following equation for a normal distribution:

$$S_p = \sqrt{\frac{p(1 \& p)}{n}}$$

where:

p=estimated proportion of error cases; and

n=sample size.

The 95 percent confidence interval can be obtained by multiplying the standard error by 1.96.

In the above example, the 95 percent confidence interval would be 1.96 x 1.1% or approximately $\pm 2.2\%$.

Note that the table provides only approximate standard errors. The approximation is good when the sample fraction n/N is small. When the fraction is large, the standard error given in the table is overestimated by a factor of

$$\frac{1}{\sqrt{\frac{N \& n}{N \& 1}}}$$

STANDARD ERROR OF PERCENTAGES BASED ON SELECTED SAMPLE SIZES

Sample Size or Base of Estimated Percentage	Est. Percent	50	80	100	150	200	250	300	350	400	500	600	700	800	900	1000	1200	1500	
11	41.11	00.80	70.60	60.50	50.40	40.40	40.40	40.40	30.30	30.30	30.30	30.30	30.30	30.30	30.30	30.30	30.30	30.30	30.30
22	01.61	41.11	00.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
32	41.91	71.41	21.11	00.90	90.80	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
42	82.22	01.61	41.21	11.01	00.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
53	12.42	21.81	51.41	31.21	11.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
63	42.72	41.91	71.51	41.31	21.11	00.90	80.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
73	62.92	62.11	81.61	51.41	31.11	01.00	90.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
83	83.02	72.21	91.71	61.51	41.21	11.01	00.90	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
94	03.22	92.32	01.81	71.51	41.31	21.11	01.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
104	23.43	02.42	11.91	71.61	51.31	21.11	11.00	90.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
114	43.53	12.62	22.01	81.71	61.41	31.21	11.01	00.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
124	63.63	22.72	32.11	91.71	61.51	31.21	11.11	00.90	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40	40.40
134	83.83	42.72	42.11	91.81	71.51	41.31	21.11	11.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40
144	93.93	52.82	52.22	01.91	71.61	41.31	21.21	11.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40
155	04.03	62.92	52.32	11.91	81.61	51.31	31.21	11.00	90.80	80.70	70.60	60.50	50.40	40.40	40.40	40.40	40.40	40.40	40.40
205	74.54	03.32	82.52	32.12	01.81	61.51	41.31	31.21	21.10	10.90	00.80	00.70	00.60	00.50	00.40	00.30	00.20	00.10	00.00
256	14.84	33.53	12.72	52.32	21.91	81.61	51.41	41.31	31.10	20.90	10.80	00.70	00.60	00.50	00.40	00.30	00.20	00.10	00.00
306	55.14	63.73	22.92	62.42	32.01	91.71	61.51	41.31	31.20	20.90	10.80	00.70	00.60	00.50	00.40	00.30	00.20	00.10	00.00
356	75.34	83.93	43.02	82.52	42.11	91.81	71.61	51.41	41.20	30.80	20.70	10.60	00.50	00.40	00.30	00.20	00.10	00.00	00.00
406	95.54	94.03	53.12	82.62	42.22	01.91	71.61	51.41	41.30	30.70	20.60	10.50	00.40	00.30	00.20	00.10	00.00	00.00	00.00
457	05.65	04.13	53.12	92.72	52.22	01.91	81.71	61.41	41.30	30.60	20.50	10.40	00.30	00.20	00.10	00.00	00.00	00.00	00.00
507	15.65	04.13	53.22	92.72	52.22	01.91	81.71	61.41	41.30	30.50	20.40	10.30	00.20	00.10	00.00	00.00	00.00	00.00	00.00

APPENDIX D

TANF SAMPLE PLAN Guidance

TANF sampling plan requirements are detailed in the TANF Manual, Sampling and Statistical Methods (Sections 1300, 1400, and 1500). Sampling plans for the active cases (including newly approved applicants) and the closed cases are required. The plans must conform to principles of probability sampling, i.e., each case in the population must have a known, non-zero probability of selection and computational methods of estimation must lead to a unique estimate. More specifically the plan must describe the following:

CLXX. **Sample Frame** - Documentation of methods for constructing and maintaining the sample frame(s), including assessment of frame completeness and any potential problems associated with using the sample frame(s). The plan must explicitly describe the following sample frame characteristics:

CLXX. Date(s) when the sample cases (both regular and supplemental, if applicable) for the sample month are selected, e.g., first workday of the month following the sample month).

Comments:

CLXX. Source, components, accuracy and completeness of the sample frame in relation to the total caseload; if not accurate or complete, explanation of why not and how the State (Tribe) plans to correct for the problems with the sample frame.

Comments:

CLXX. Procedures for ensuring that the sample frame contains complete coverage of the applicable caseload (e.g., active TANF sample frame includes all families receiving assistance under the State's or Tribe's TANF Program, including all newly approved applicants for the sample month and closed TANF sample frame includes all families no longer receiving assistance under the State's TANF Program, i.e., assistance terminated effective for the sample month).

Comments:

CLXX. Whether or not the frame is constructed by combining more than one list; if more than one list, an explanation of how the lists are identified and how duplication of cases on lists are prevented.

Comments:

CLXX. How the frame is compiled, e.g., whether the frame is compiled entirely in the State office, entirely in local offices, in the State office based on information supplied by local offices, etc.

Comments:

CLXX. Form of the frame, e.g., a computer file, microfilm, or hard copy; if parts of the frame are in different forms, specifications for each part.

Comments:

CLXX. Frequency and length of delays and method used in updating the frame or its sources.

Comments:

CLXX. Procedures for estimating the proportion of sample cases for which the State (Tribe) will not be able to collect and report case record information (e.g., dropped as listed-in-error because the family did not receive TANF assistance for the reporting month).

Comments:

CLXX. Methods of locating and deleting "listed-in-error" cases from the frame.

Comments:

CLXX. Structure of the frame, i.e., the order of cases within each list and the data elements on the frame, including definitions of coded values.

Comments:

CLXX. Treatment of special populations under TANF (e.g., individuals under a tribal family assistance plan, a non-custodial parent who participates in work activities).

Comments:

CLXX. Criteria for stratifying sample (if applicable).

Comments:

CLXXI. **Sample Selection Procedures** - The sampling plan must describe in detail the procedures for selecting the sample cases. The plan must explicitly describe the following characteristics:

CLXXI. Procedures for estimation of caseload size.

Comments:

CLXXI. Procedures for determination of an appropriate allowance for cases that might be dropped from the sample for acceptable reasons.

Comments:

CLXXI. Procedures for determining the required sample size and indication of the sample size.

Comments:

CLXXI. If stratified sample design, procedures for sample allocation.

Comments:

CLXXI. Procedures for the computation of sample intervals and the determination of random starts (systematic random sampling or stratified systematic random sampling), if applicable.

Comments:

CLXXI. Application of selection procedures to identify sample cases.

Comments:

CLXXI. Procedures to compensate for excessive oversampling or undersampling.

Comments:

CLXXI. Time schedule for each step in the sampling procedure.

Comments:

CLXXI. Relationship, if appropriate, to sampling frames for other programs (e.g., Welfare-to-Work).

Comments:

CLXXII. **Additional Sampling Plan Information**

CLXXII. Treatment of any special cases or circumstances unique to the State or Tribe.

Comments:

CLXXII. Documentation of methods for estimating proportions and their sampling errors, including the computation of weights where appropriate.

Comments:

APPENDIX E

TRIBAL CODES FOR THE TANF PROGRAM

This list of codes for tribes is based on the Federal Register: November 13, 1996 (Volume 61, Number 220), Notices, Page 58211-58216. From the Federal Register Online via GPO Access [wais.access.gpo.gov]

Alaska Non-Profit Associations:

NOTE: The "Special Rules for Indian Tribes in Alaska" specify that "...only the Metlakatla Indian Community, Annette Island Reserve, and..." Alaska native regional corporations are eligible. However, the 'corporations' listed are actually the non-profit arms of the corporations

CODE Alaska Non-Profit Association

- 801Metlakatla Indian Community, Annette Island Reserve, Alaska
- 802Artic Slope Native Association
- 803Kawerak, Inc.
- 804Maniilag Association
- 805Association of Village Council Presidents
- 806Tananana Chiefs Conference
- 807Cook Inlet Tribal Council
- 808Bristol Bay Native Association
- 809Aleutian and Pribolof Islan Association
- 810Chugachmuit
- 811Tlinget Haida Central Council
- 812Kodiak Area Native Association
- 813Copper River Native Association

Consortiums: Codes for consortiums of tribal entities listed below can be obtained by contacting

John Bushman
Director, Division of Tribal Services
Office of Community Services, Administration for Children and Families
370 L'Enfant Promenade, Washington, D.C. 20447-0001

Phone - Voice (202) 401-2418;
Fax (202) 401-5718;
E-mail - JBushman@acf.dhhs.gov

CODES FOR TRIBAL TANF PROGRAMS (Cont.)

All Others:

Below are the codes for Indian entities in the contiguous 48 states which are Federally recognized and eligible to establish a tribal TANF program or participate in a consortium of Tribes for a Tribal TANF program. All three digits are to be used (for example, '001' not '1').

CODETRIBAL ENTITY

- 001Absentee-Shawnee Tribe of Indians of Oklahoma
- 002Agua Caliente Band of Cahuilla Indians of the Agua Caliente Indian Reservation, California
- 003Ak Chin Indian Community of Papago Indians of the Maricopa, Ak Chin Reservation, Arizona
- 004Alabama and Coushatta Tribes of Texas
- 005Alabama-Quassarte Tribal Town of the Creek Nation of Oklahoma
- 006Alturas Indian Rancheria of Pit River Indians of California
- 007Apache Tribe of Oklahoma
- 008Arapahoe Tribe of the Wind River Reservation, Wyoming
- 009Aroostook Band of Micmac Indians of Maine
- 010Assiniboine and Sioux Tribes of the Fort Peck Indian Reservation, Montana
- 011Augustine Band of Cahuilla Mission Indians of the Augustine Reservation, California
- 012Bad River Band of the Lake Superior Tribe of Chippewa Indians of the Bad River Reservation, Wisconsin
- 013Bay Mills Indian Community of the Sault Ste. Marie Band of Chippewa Indians, Bay Mills Reservation, Michigan
- 014Bear River Band of the Rohnerville Rancheria of California
- 015Berry Creek Rancheria of Maidu Indians of California
- 016Big Lagoon Rancheria of Smith River Indians of California
- 017Big Pine Band of Owens Valley Paiute Shoshone Indians of the Big Pine Reservation, California
- 018Big Sandy Rancheria of Mono Indians of California
- 019Big Valley Rancheria of Pomo & Pit River Indians of California
- 020Blackfeet Tribe of the Blackfeet Indian Reservation of Montana
- 021Blue Lake Rancheria of California
- 022Bridgeport Paiute Indian Colony of California
- 023Buena Vista Rancheria of Me-Wuk Indians of California
- 024Burns Paiute Tribe of the Burns Paiute Indian Colony of Oregon
- 025Cabazon Band of Cahuilla Mission Indians of the Cabazon Reservation, California
- 026Cachil DeHe Band of Wintun Indians of the Colusa Indian Community of the Colusa Rancheria, California
- 027Caddo Indian Tribe of Oklahoma
- 028Cahuilla Band of Mission Indians of the Cahuilla Reservation, California
- 029Cahto Indian Tribe of the Laytonville Rancheria, California
- 030Campo Band of Diegueno Mission Indians of the Campo Indian Reservation, California

CODE TRIBAL ENTITY

- 031 Barona Group of Capitan Grande Band of Diegueno Mission Indians of the Barona Reservation, California
- 032 Viejas (Baron Long) Group of Capitan Grande Band of Diegueno Mission Indians of the Viejas Reservation, California
 - 033 Catawba Tribe of South Carolina
 - 034 Cayuga Nation of New York
 - 035 Cedarville Rancheria of Northern Paiute Indians of California
 - 036 Chemehuevi Indian Tribe of the Chemehuevi Reservation, California
 - 037 Cher-Ae Heights Indian Community of the Trinidad Rancheria, California
 - 038 Cherokee Nation of Oklahoma
 - 039 Cheyenne-Arapaho Tribes of Oklahoma
- 040 Cheyenne River Sioux Tribe of the Cheyenne River Reservation, South Dakota
 - 041 Chickasaw Nation of Oklahoma
 - 042 Chicken Ranch Rancheria of Me-Wuk Indians of California
 - 043 Chippewa-Cree Indians of the Rocky Boy's Reservation, Montana
 - 044 Chitimacha Tribe of Louisiana
 - 045 Choctaw Nation of Oklahoma
 - 046 Citizen Potawatomi Nation, Oklahoma
 - 047 Cloverdale Rancheria of Pomo Indians of California
- 048 Coast Indian Community of Yurok Indians of the Resighini Rancheria, California
 - 049 Cocopah Tribe of Arizona
 - 050 Coeur D'Alene Tribe of the Coeur D'Alene Reservation, Idaho
 - 051 Cold Springs Rancheria of Mono Indians of California
- 052 Colorado River Indian Tribes of the Colorado River Indian Reservation, Arizona and California
 - 053 Comanche Indian Tribe, Oklahoma
 - 054 Confederated Salish & Kootenai Tribes of the Flathead Reservation, Montana
 - 055 Confederated Tribes of the Chehalis Reservation, Washington
 - 056 Confederated Tribes of the Colville Reservation, Washington
 - 057 Confederated Tribes of the Coos, Lower Umpqua and Siuslaw Indians of Oregon
 - 058 Confederated Tribes of the Goshute Reservation, Nevada and Utah
 - 059 Confederated Tribes of the Grand Ronde Community of Oregon
 - 060 Confederated Tribes of the Siletz Reservation, Oregon
 - 061 Confederated Tribes of the Umatilla Reservation, Oregon
 - 062 Confederated Tribes of the Warm Springs Reservation of Oregon
- 063 Confederated Tribes and Bands of the Yakama Indian Nation of the Yakama Reservation, Washington
 - 064 Coquille Tribe of Oregon
 - 065 Cortina Indian Rancheria of Wintun Indians of California
 - 066 Coshatta Tribe of Louisiana
 - 067 Cow Creek Band of Umpqua Indians of Oregon
 - 068 Coyote Valley Band of Pomo Indians of California
 - 069 Crow Tribe of Montana
- 070 Crow Creek Sioux Tribe of the Crow Creek Reservation, South Dakota

CODE TRIBAL ENTITY

- 071Cuyapaipe Community of Diegueno Mission Indians of the Cuyapaipe Reservation, California
 - 072Death Valley Timbi-Sha Shoshone Band of California
 - 073Delaware Tribe of Indians, Oklahoma
 - 074Delaware Tribe of Western Oklahoma
 - 075Devils Lake Sioux Tribe of the Devils Lake Sioux Reservation, North Dakota
 - 076Dry Creek Rancheria of Pomo Indians of California
 - 077Duckwater Shoshone Tribe of the Duckwater Reservation, Nevada
 - 078Eastern Band of Cherokee Indians of North Carolina
 - 079Eastern Shawnee Tribe of Oklahoma
 - 080Elem Indian Colony of Pomo Indians of the Sulphur Bank Rancheria, California
 - 081Elk Valley Rancheria of California
 - 082Ely Shoshone Tribe of Nevada
 - 083Enterprise Rancheria of Maidu Indians of California
 - 084Flandreau Santee Sioux Tribe of South Dakota
 - 085Forest County Potawatomi Community of Wisconsin Potawatomi Indians, Wisconsin
 - 086Fort Belknap Indian Community of the Fort Belknap Reservation of Montana
 - 087Fort Bidwell Indian Community of Paiute Indians of the Fort Bidwell Reservation, California
 - 088Fort Independence Indian Community of Paiute Indians of the Fort Independence Reservation, California
 - 089Fort McDermitt Paiute and Shoshone Tribes of the Fort McDermitt Indian Reservation, Nevada
 - 090Fort McDowell Mohave-Apache Indian Community of the Fort McDowell Indian Reservation, Arizona
 - 091Fort Mojave Indian Tribe of Arizona, California & Nevada
 - 092Fort Sill Apache Tribe of Oklahoma
 - 093Gila River Pima-Maricopa Indian Community of the Gila River Indian Reservation of Arizona
 - 094Grand Traverse Band of Ottawa & Chippewa Indians of Michigan
 - 095Greenville Rancheria of Maidu Indians of California
 - 096Grindstone Indian Rancheria of Wintun-Wailaki Indians of California
 - 097Guidiville Rancheria of California
 - 098Hannahville Indian Community of Wisconsin Potawatomi Indians of Michigan
 - 099Havasupai Tribe of the Havasupai Reservation, Arizona
 - 100Ho-Chunk Nation of Wisconsin - (formerly known as the Wisconsin Winnebago Tribe)
 - 101Hoh Indian Tribe of the Hoh Indian Reservation, Washington
 - 102Hoopa Valley Tribe of the Hoopa Valley Reservation, California
 - 103Hopi Tribe of Arizona
 - 104Hopland Band of Pomo Indians of the Hopland Rancheria, California
 - 105Houlton Band of Maliseet Indians of Maine
 - 106Hualapai Indian Tribe of the Hualapai Indian Reservation, Arizona
 - 107Huron Potawatomi, Inc., Michigan
 - 108Inaja Band of Diegueno Mission Indians of the Inaja and Cosmit
 - 109Reservation, California
 - 110Ione Band of Miwok Indians of California
 - 111Iowa Tribe of Kansas and Nebraska

CODE TRIBAL ENTITY

- 112Iowa Tribe of Oklahoma
- 113Jackson Rancheria of Me-Wuk Indians of California
- 114Jamestown Klallam Tribe of Washington
- 115Jamul Indian Village of California
- 116Jena Band of Choctaw Indians, Louisiana
- 117Jicarilla Apache Tribe of the Jicarilla Apache Indian Reservation, New Mexico
- 118Kaibab Band of Paiute Indians of the Kaibab Indian Reservation, Arizona
- 119Kalispel Indian Community of the Kalispel Reservation, Washington
- 120Karuk Tribe of California
- 121Kashia Band of Pomo Indians of the Stewarts Point Rancheria, California
- 122Kaw Nation, Oklahoma
- 123Keweenaw Bay Indian Community of L'Anse and Ontonagon Bands of Chippewa Indians of the L'Anse Reservation, Michigan
- 124Kialegee Tribal Town of the Creek Indian Nation of Oklahoma
- 125Kickapoo Tribe of Indians of the Kickapoo Reservation in Kansas
- 126Kickapoo Tribe of Oklahoma
- 127Kickapoo Traditional Tribe of Texas
- 128Kiowa Indian Tribe of Oklahoma
- 129Klamath Indian Tribe of Oregon
- 130Kootenai Tribe of Idaho
- 131La Jolla Band of Luiseno Mission Indians of the La Jolla Reservation, California
- 132La Posta Band of Diegueno Mission Indians of the La Posta Indian Reservation, California
- 133La Courte Oreilles Band of Lake Superior Chippewa Indians of the Lac Courte Oreilles Reservation of Wisconsin
- 134Lac du Flambeau Band of Lake Superior Chippewa Indians of the Lac du Flambeau Reservation of Wisconsin
- 135Lac Vieux Desert Band of Lake Superior Chippewa Indians of Michigan
- 136Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony, Nevada
- 137Little River Band of Ottawa Indians of Michigan
- 138Little Traverse Bay Bands of Odawa Indians of Michigan
- 139Los Coyotes Band of Cahuilla Mission Indians of the Los Coyotes Reservation, California
- 140Lovelock Paiute Tribe of the Lovelock Indian Colony, Nevada
- 141Lower Brule Sioux Tribe of the Lower Brule Reservation, South Dakota
- 142Lower Elwha Tribe of the Lower Elwha Reservation, Washington
- 143Lower Sioux Indian Community of Minnesota Mdewakanton Sioux Indians of the Lower Sioux Reservation in Minnesota
- 144Lummi Tribe of the Lummi Reservation, Washington
- 145Lytton Rancheria of California
- 146Makah Indian Tribe of the Makah Indian Reservation, Washington
- 147Manchester Band of Pomo Indians of the Manchester-Point Arena Rancheria, California
- 148Manzanita Band of Diegueno Mission Indians of the Manzanita Reservation, California
- 149Mashantucket Pequot Tribe of Connecticut
- 150Mechoopda Indian Tribe of Chico Rancheria, California

CODE TRIBAL ENTITY

- 151 Menominee Indian Tribe of Wisconsin
- 152 Mesa Grande Band of Diegueno Mission Indians of the Mesa Grande Reservation, California
- 153 Mescalero Apache Tribe of the Mescalero Reservation, New Mexico
- 154 Miami Tribe of Oklahoma
- 155 Miccosukee Tribe of Indians of Florida
- 156 Middletown Rancheria of Pomo Indians of California
- 157 Minnesota Chippewa Tribe, Minnesota
- (All six component reservations: Bois Forte Band (Nett Lake); Fond du Lac Band; Grand Portage Band; Leech Lake Band; Mille Lacs Band; White Earth Band)
- 158 Mississippi Band of Choctaw Indians, Mississippi
- 159 Moapa Band of Paiute Indians of the Moapa River Indian Reservation, Nevada
- 160 Modoc Tribe of Oklahoma
- 161 Mohegan Indian Tribe of Connecticut
- 162 Mooretown Rancheria of Maidu Indians of California
- 163 Morongo Band of Cahuilla Mission Indians of the Morongo Reservation, California
- 164 Muckleshoot Indian Tribe of the Muckleshoot Reservation, Washington
- 165 Muscogee (Creek) Nation of Oklahoma
- 166 Narragansett Indian Tribe of Rhode Island
- 167 Navajo Nation of Arizona, New Mexico & Utah
- 168 Nez Perce Tribe of Idaho
- 169 Nisqually Indian Tribe of the Nisqually Reservation, Washington
- 170 Nooksack Indian Tribe of Washington
- 171 Northern Cheyenne Tribe of the Northern Cheyenne Indian Reservation, Montana
- 172 Northfork Rancheria of Mono Indians of California
- 173 Northwestern Band of Shoshoni Nation of Utah (Washakie)
- 174 Oglala Sioux Tribe of the Pine Ridge Reservation, South Dakota
- 175 Omaha Tribe of Nebraska
- 176 Oneida Nation of New York
- 177 Oneida Tribe of Wisconsin
- 178 Onondaga Nation of New York
- 179 Osage Nation of Oklahoma
- 180 Ottawa Tribe of Oklahoma
- 181 Otoe-Missouria Tribe of Indians, Oklahoma
- 182 Paiute Indian Tribe of Utah
- 183 Paiute-Shoshone Indians of the Bishop Community of the Bishop Colony, California
- 184 Paiute-Shoshone Tribe of the Fallon Reservation and Colony, Nevada
- 185 Paiute-Shoshone Indians of the Lone Pine Community of the Lone Pine
- 186 Reservation, California
- 187 Pala Band of Luiseno Mission Indians of the Pala Reservation, California
- 188 Pascua Yaqui Tribe of Arizona
- 189 Paskenta Band of Nomlaki Indians of California
- 190 Passamaquoddy Tribe of Maine
- 191 Pauma Band of Luiseno Mission Indians of the Pauma & Yuima Reservation, California

CODE TRIBAL ENTITY

- 192Pawnee Indian Tribe of Oklahoma
- 193Pechanga Band of Luiseno Mission Indians of the Pechanga Reservation, California
- 194Penobscot Tribe of Maine
- 195Peoria Tribe of Oklahoma
- 196Picayune Rancheria of Chukchansi Indians of California
- 197Pinoleville Rancheria of Pomo Indians of California
- 198Pit River Tribe of California (includes Big Bend, Lookout, Montgomery Creek & Roaring Creek Rancherias & XL Ranch)
- 199Poarch Band of Creek Indians of Alabama
- 200Pokagon Band of Potawatomi Indians of Michigan
- 201Ponca Tribe of Indians of Oklahoma
- 202Ponca Tribe of Nebraska
- 203Port Gamble Indian Community of the Port Gamble Reservation, Washington
- 204Potter Valley Rancheria of Pomo Indians of California
- 205Prairie Band of Potawatomi Indians, Kansas
- 206Prairie Island Indian Community of Minnesota Mdewakanton Sioux Indians of the Prairie Island Reservation, Minnesota
- 207Pueblo of Acoma, New Mexico
- 208Pueblo of Cochiti, New Mexico
- 209Pueblo of Jemez, New Mexico
- 210Pueblo of Isleta, New Mexico
- 211Pueblo of Laguna, New Mexico
- 212Pueblo of Nambe, New Mexico
- 213Pueblo of Picuris, New Mexico
- 214Pueblo of Pojoaque, New Mexico
- 215Pueblo of San Felipe, New Mexico
- 216Pueblo of San Juan, New Mexico
- 217Pueblo of San Ildefonso, New Mexico
- 218Pueblo of Sandia, New Mexico
- 219Pueblo of Santa Ana, New Mexico
- 220Pueblo of Santa Clara, New Mexico
- 221Pueblo of Santo Domingo, New Mexico
- 222Pueblo of Taos, New Mexico
- 223Pueblo of Tesuque, New Mexico
- 224Pueblo of Zia, New Mexico
- 225Puyallup Tribe of the Puyallup Reservation, Washington
- 226Pyramid Lake Paiute Tribe of the Pyramid Lake Reservation, Nevada
- 227Quapaw Tribe of Oklahoma
- 228Quartz Valley Indian Community of the Quartz Valley Reservation of California
- 229Quechan Tribe of the Fort Yuma Indian Reservation, California & Arizona
- 230Quileute Tribe of the Quileute Reservation, Washington
- 231Quinault Tribe of the Quinault Reservation, Washington
- 232Ramona Band or Village of Cahuilla Mission Indians of California

CODE TRIBAL ENTITY

- 233Red Cliff Band of Lake Superior Chippewa Indians of Wisconsin
- 234Red Lake Band of Chippewa Indians of the Red Lake Reservation, Minnesota
- 235Redding Rancheria of California
- 236Redwood Valley Rancheria of Pomo Indians of California
- 237Reno-Sparks Indian Colony, Nevada
- 238Rincon Band of Luiseno Mission Indians of the Rincon Reservation, California
- 239Robinson Rancheria of Pomo Indians of California
- 240Rosebud Sioux Tribe of the Rosebud Indian Reservation, South Dakota
- 241Round Valley Indian Tribes of the Round Valley Reservation, California - (formerly known as the Covelo Indian Community)
- 243Rumsey Indian Rancheria of Wintun Indians of California
- 244Sac & Fox Tribe of the Mississippi in Iowa
- 245Sac & Fox Nation of Missouri in Kansas and Nebraska
- 246Sac & Fox Nation, Oklahoma
- 247Saginaw Chippewa Indian Tribe of Michigan, Isabella Reservation
- 248Salt River Pima-Maricopa Indian Community of the Salt River Reservation, Arizona
- 249Samish Indian Tribe
- 250San Carlos Apache Tribe of the San Carlos Reservation, Arizona
- 251San Juan Southern Paiute Tribe of Arizona
- 252San Manual Band of Serrano Mission Indians of the San Manual Reservation, California
- 253San Pasqual Band of Diegueno Mission Indians of California
- 254Santa Rosa Indian Community of the Santa Rosa Rancheria, California
- 255Santa Rosa Band of Cahuilla Mission Indians of the Santa Rosa Reservation, California
- 256Santa Ynez Band of Chumash Mission Indians of the Santa Ynez Reservation, California
- 257Reservation, California
- 258Santa Ysabel Band of Diegueno Mission Indians of the Santa Ysabel Reservation, California
- 259Santee Sioux Tribe of the Santee Reservation of Nebraska
- 260Sauk-Suiattle Indian Tribe of Washington
- 261Sault Ste. Marie Tribe of Chippewa Indians of Michigan
- 262Scotts Valley Band of Pomo Indians of California
- 263Seminole Nation of Oklahoma
- 264Seminole Tribe of Florida, Dania, Big Cypress & Brighton Reservations
- 265Seneca Nation of New York
- 266Seneca-Cayuga Tribe of Oklahoma
- 267Shakopee Mdewakanton Sioux Community of Minnesota (Prior Lake)
- 268Sheep Ranch Rancheria of Me-Wuk Indians of California
- 269Sherwood Valley Rancheria of Pomo Indians of California
- 270Shingle Springs Band of Miwok Indians, Shingle Springs Rancheria (Verona Tract), California
- 271Shoalwater Bay Tribe of the Shoalwater Bay Indian Reservation, Washington
- 272Shoshone Tribe of the Wind River Reservation, Wyoming
- 273Shoshone-Bannock Tribes of the Fort Hall Reservation of Idaho
- 274Shoshone-Paiute Tribes of the Duck Valley Reservation, Nevada
- 275Sisseton-Wahpeton Sioux Tribe of the Lake Traverse Reservation, South Dakota

CODE TRIBAL ENTITY

- 276Skokomish Indian Tribe of the Skokomish Reservation, Washington
- 277Skull Valley Band of Goshute Indians of Utah
- 278Smith River Rancheria of California
- 279Soboba Band of Luiseno Mission Indians of the Soboba Reservation, California
- 280Sokaogon Chippewa Community of the Mole Lake Band of Chippewa Indians, Wisconsin
- 281Southern Ute Indian Tribe of the Southern Ute Reservation, Colorado
- 282Spokane Tribe of the Spokane Reservation, Washington
- 283Squaxin Island Tribe of the Squaxin Island Reservation, Washington
- 284St. Croix Chippewa Indians of Wisconsin, St. Croix Reservation
- 285St. Regis Band of Mohawk Indians of New York
- 286Standing Rock Sioux Tribe of North & South Dakota
- 287Stockbridge-Munsee Community of Mohican Indians of Wisconsin
- 288Stillaguamish Tribe of Washington
- 289Summit Lake Paiute Tribe of Nevada
- 290Suquamish Indian Tribe of the Port Madison Reservation, Washington
- 291Susanville Indian Rancheria of Paiute, Maidu, Pit River & Washoe Indians of California
- 292Swinomish Indians of the Swinomish Reservation, Washington
- 293Sycuan Band of Diegueno Mission Indians of California
- 294Table Bluff Rancheria of Wiyot Indians of California
- 295Table Mountain Rancheria of California
- 296Te-Moak Tribes of Western Shoshone Indians of Nevada
- 297Thlopthlocco Tribal Town of the Creek Nation of Oklahoma
- 298Three Affiliated Tribes of the Fort Berthold Reservation, North Dakota
- 299Tohono O'odham Nation of Arizona - (formerly known as the Papago Tribe of the Sells, Gila Bend & San Xavier Reservation, Arizona)
- 300Tonawanda Band of Seneca Indians of New York
- 301Tonkawa Tribe of Indians of Oklahoma
- 302Tonto Apache Tribe of Arizona
- 303Torres-Martinez Band of Cahuilla Mission Indians of California
- 304Tule River Indian Tribe of the Tule River Reservation, California
- 305Tulalip Tribes of the Tulalip Reservation, Washington
- 306Tunica-Biloxi Indian Tribe of Louisiana
- 307Tuolumne Band of Me-Wuk Indians of the Tuolumne Rancheria of California
- 308Turtle Mountain Band of Chippewa Indians of North Dakota
- 309Tuscarora Nation of New York
- 310Twenty-Nine Palms Band of Luiseno Mission Indians of California
- 311United Auburn Indian Community of the Auburn Rancheria of California
- 312United Keetoowah Band of Cherokee Indians of Oklahoma
- 313Upper Lake Band of Pomo Indians of Upper Lake Rancheria of California
- 314Upper Sioux Indian Community of the Upper Sioux Reservation, Minnesota
- 315Upper Skagit Indian Tribe of Washington
- 316Ute Indian Tribe of the Uintah & Ouray Reservation, Utah
- 317Ute Mountain Tribe of the Ute Mountain Reservation, Colorado, New Mexico & Utah

CODE TRIBAL ENTITY

- 318Utu Utu Gwaitu Paiute Tribe of the Benton Paiute Reservation, California
- 319Walker River Paiute Tribe of the Walker River Reservation, Nevada
- 320Wampanoag Tribe of Gay Head (Aquinnah) of Massachusetts
- 321Washoe Tribe of Nevada & California (Carson Colony, Dresslerville & Washoe Ranches)
- 322White Mountain Apache Tribe of the Fort Apache Reservation, Arizona
- 323Wichita and Affiliated Tribes (Wichita, Keechi, Waco & Tawakonie), Oklahoma
- 324Winnebago Tribe of Nebraska
- 325Winnemucca Indian Colony of Nevada
- 326Wyandotte Tribe of Oklahoma
- 327Yankton Sioux Tribe of South Dakota
- 328Yavapai-Apache Nation of the Camp Verde Indian Reservation, Arizona
- 329Yavapai-Prescott Tribe of the Yavapai Reservation, Arizona
- 330Yerington Paiute Tribe of the Yerington Colony & Campbell Ranch, Nevada
- 331Yomba Shoshone Tribe of the Yomba Reservation, Nevada
- 332Ysleta Del Sur Pueblo of Texas
- 333Yurok Tribe of the Yurok Reservation, California
- 334Zuni Tribe of the Zuni Reservation, New Mexico

CODE TRIBAL ENTITY

APPENDIX F

FIPS County Codes - Alphabetical List

Note that FIPS county codes are unique within state. You will usually need to pre-append the 2-digit FIPS state code to form a complete FIPS county code.

ALABAMA - 01

001 =Autauga
003 =Baldwin
005 =Barbour
007 =Bibb
009 =Blount
011 =Bullock
013 =Butler
015 =Calhoun
017 =Chambers
019 =Cherokee
021 =Chilton
023 =Choctaw
025 =Clarke
027 =Clay
029 =Cleburne
031 =Coffee
033 =Colbert
035 =Conecuh
037 =Coosa
039 =Covington
041 =Crenshaw
043 =Cullman
045 =Dale
047 =Dalla
049 =DeKalb
051 =Elmore
053 =Escambia
055 =Etowah
057 =Fayette
059 =Franklin
061 =Geneva
063 =Greene
065 =Hale
067 =Henry
069 =Houston
071 =Jackson
073 =Jefferson
075 =Lamar
077 =Lauderdale
079 =Lawrence
081 =Lee
083 =Limestone
085 =Lowndes
087 =Macon
089 =Madison
091 =Marengo
093 =Marion
095 =Marshall
097 =Mobile
099 =Monroe
101 =Montgomery
103 =Morgan
105 =Perry
107 =Pickens
109 =Pike
111 =Randolph
113 =Russell
115 =St. Clair
117 =Shelby
119 =Sumter
121 =Talladega
123 =Tallapoosa

125 =Tuscaloosa
127 =Walker
129 =Washington
131 =Wilcox
133 =Winston

ALASKA - 02

013 =Aleutians East
016 =Aleutians West Census
020 =Anchorage
050 =Bethel Census
060 =Bristol Bay
070 =Dillingham Census
090 =Fairbanks North Star
100 =Haines
110 =Juneau
122 =Kenai Peninsula
130 =Ketchikan Gateway
150 =Kodiak Island
164 =Lake and Peninsula
170 =Matanuska-Susitna
180 =Nome Census
185 =North Slope
188 =Northwest Arctic
201 =Prince of Wales-Outer
Ketchikan Census
220 =Sitka
231 =
Skagway-Yakutat-Angoon
Census

240 =Southeast Fairbanks
Census
261 =Valdez-Cordova
Census
270 =Wade Hampton
Census
280 =Wrangell-Petersburg
Census
290 =Yukon-Koyukuk
Census

ARIZONA - 04

001 =Apache
003 =Cochise
005 =Coconino
007 =Gila
009 =Graham
011 =Greenlee
012 =La Paz
013 =Maricopa
015 =Mohave
017 =Navajo
019 =Pima
021 =Pinal
023 =Santa Cruz
025 =Yavapai
027 =Yuma

ARKANSAS - 05

001 =Arkansas
003 =Ashley
005 =Baxter
007 =Benton
009 =Boone
011 =Bradley
013 =Calhoun
015 =Carroll
017 =Chicot
019 =Clark
021 =Clay

023 =Clebune
025 =Cleveland
027 =Columbia
029 =Conway
031 =Craighead
033 =Crawford
035 =Crittenden
037 =Cross
039 =Dallas
041 =Desha
043 =Drew
045 =Faulkner
047 =Franklin
049 =Fulton
051 =Garland
053 =Grant
055 =Greene
057 =Hempstead
059 =Hot Spring
061 =Howard
063 =Independence
065 =Izard
067 =Jackson
069 =Jefferson
071 =Johnson
073 =Lafayette
075 =Lawrence
077 =Lee
079 =Lincoln
081 =Little River
083 =Logan
085 =Lonoke
087 =Madison
089 =Marion
091 =Miller
093 =Mississippi
095 =Monroe
097 =Montgomery
099 =Nevada
101 =Newton
103 =Ouachita
105 =Perry
107 =Phillips
109 =Pike

111 =Poinsett
113 =Polk
115 =Pope
117 =Prairie
119 =Pulaski
121 =Randolph
123 =St. Francis
125 =Saline
127 =Scott
129 =Searcy
131 =Sebastian
133 =Sevier
135 =Sharp
137 =Stone
139 =Union
141 =Van Buren
143 =Washington
145 =White
147 =Woodruff
149 =Yell

CALIFORNIA - 06

001 =Alameda
003 =Alpine
005 =Amador
007 =Butte
009 =Calaveras
011 =Colusa
013 =Contra Costa
015 =Del Norte
017 =El Dorado
019 =Fresno
021 =Glenn
023 =Humboldt
025 =Imperial
027 =Inyo
029 =Kern
031 =Kings
033 =Lake
035 =Lassen
037 =Los Angeles
039 =Madera

041 =Marin
043 =Mariposa
045 =Mendocino
047 =Merced
049 =Modoc
051 =Mono
053 =Monterey
055 =Napa
057 =Nevada
059 =Orange
061 =Placer
063 =Plumas
065 =Riverside
067 =Sacramento
069 =San Benito
071 =San Bernardino
073 =San Diego
075 =San Francisco
077 =San Joaquin
079 =San Luis Obispo
081 =San Mateo
083 =Santa Barbara
085 =Santa Clara
087 =Santa Cruz
089 =Shasta
091 =Sierra
093 =Siskiyou
095 =Solano
097 =Sonoma
099 =Stanislaus
101 =Sutter
103 =Tehama
105 =Trinity
107 =Tular
109 =Tuolumne
111 =Ventura
113 =Yolo
115 =Yuba

COLORADO - 08

001 =Adams
003 =Alamosa

005 =Arapahoe
007 =Archuleta
009 =Baca
011 =Bent
013 =Boulder
015 =Chaffee
017 =Cheyenne
019 =Clear Creek
021 =Conejos
023 =Costilla
025 =Crowley
027 =Custer
029 =Delta
031 =Denver
033 =Dolores
035 =Douglas
037 =Eagle
039 =Elbert
041 =El Paso
043 =Fremont
045 =Garfield
047 =Gilpin
049 =Grand
051 =Gunnison
053 =Hinsdale
055 =Huerfano
057 =Jackson
059 =Jefferson
061 =Kiowa
063 =Kit Carson
065 =Lake
067 =La Plata
069 =Larimer
071 =Las Animas
073 =Lincoln
075 =Logan
077 =Mesa
079 =Mineral
081 =Moffat
083 =Montezuma
085 =Montrose
087 =Morgan
089 =Otero
091 =Ouray

093 =Park
095 =Phillips
097 =Pitkin
099 =Prowers
101 =Pueblo
103 =Rio Blanco
105 =Rio Grande
107 =Routt
109 =Saguache
111 =San Juan
113 =San Miguel
115 =Sedgwick
117 =Summit
119 =Teller
121 =Washington
123 =Weld
125 =Yuma

CONNECTICUT - 09

001 =Fairfield
003 =Hartford
005 =Litchfield
007 =Middlesex
009 =New Haven
011 =New London
013 =Tolland
015 =Windham

DELAWARE - 10

001 =Kent
003 =New Castle
005 =Sussex

DIST. OF COL. - 11

001 =District of Columbia

FLORIDA - 12

001 =Alachua
003 =Baker
005 =Bay
007 =Bradford
009 =Brevard
011 =Broward
013 =Calhoun
015 =Charlotte
017 =Citrus
019 =Clay
021 =Collier
023 =Columbia
025 =Dade
027 =DeSoto
029 =Dixie
031 =Duval
033 =Escambia
035 =Flagler
037 =Franklin
039 =Gadsden
041 =Gilchrist
043 =Glades
045 =Gulf
047 =Hamilton
049 =Hardee
051 =Hendry
053 =Hernando
055 =Highlands
057 =Hillsborough
059 =Holmes
061 =Indian River
063 =Jackson
065 =Jefferson
067 =Lafayette
069 =Lake
071 =Lee
073 =Leon
075 =Levy
077 =Liberty
079 =Madison
081 =Manatee
083 =Marion
085 =Martin
087 =Monroe

089 =Nassau
091 =Okaloosa
093 =Okeechobee
095 =Orange
097 =Osceola
099 =Palm Beach
101 =Pasco
103 =Pinellas
105 =Polk
107 =Putnam
109 =St. Johns
111 =St. Lucie
113 =Santa Rosa
115 =Sarasota
117 =Seminole
119 =Sumter
121 =Suwannee
123 =Taylor
125 =Union
127 =Volusia
129 =Wakulla
131 =Walton
133 =Washington

GEORGIA - 13

001 =Appling
003 =Atkinson
005 =Bacon
007 =Baker
009 =Baldwin
011 =Banks
013 =Barrow
015 =Bartow
017 =Ben Hill
019 =Berrien
021 =Bibb
023 =Bleckley
025 =Brantley
027 =Brooks
029 =Bryan
031 =Bulloch
033 =Burke

035 =Butts
037 =Calhoun
039 =Camden
043 =Candler
045 =Carroll
047 =Catoosa
049 =Charlton
051 =Chatham
053 =Chattahoochee
055 =Chattooga
057 =Cherokee
059 =Clarke
061 =Clay
063 =Clayton
065 =Clinch
067 =Cobb
069 =Coffee
071 =Colquitt
073 =Columbia
075 =Cook
077 =Coweta
079 =Crawford
081 =Crisp
083 =Dade
085 =Dawson
087 =Decatur
089 =DeKalb
091 =Dodge
093 =Dooly
095 =Dougherty
097 =Douglas
099 =Early
101 =Echols
103 =Effingham
105 =Elbert
107 =Emanuel
109 =Evans
111 =Fannin
113 =Fayette
115 =Floyd
117 =Forsyth
119 =Franklin
121 =Fulton
123 =Gilmer

125 =Glascock
127 =Glynn
129 =Gordon
131 =Grady
133 =Greene
135 =Gwinnett
137 =Habersham
139 =Hall
141 =Hancock
143 =Haralson
145 =Harris
147 =Hart
149 =Heard
151 =Henry
153 =Houston
155 =Irwin
157 =Jackson
159 =Jasper
161 =Jeff Davis
163 =Jefferson
165 =Jenkins
167 =Johnson
169 =Jones
171 =Lamar
173 =Lanier
175 =Laurens
177 =Lee
179 =Liberty
181 =Lincoln
183 =Long
185 =Lowndes
187 =Lumpkin
189 =McDuffie
191 =McIntosh
193 =Macon
195 =Madison
197 =Marion
199 =Meriwether
201 =Miller
205 =Mitchell
207 =Monroe
209 =Montgomery
211 =Morgan
213 =Murray

215 =Muscogee
217 =Newton
219 =Oconee
221 =Oglethorpe
223 =Paulding
225 =Peach
227 =Pickens
229 =Pierce
231 =Pike
233 =Polk
235 =Pulaski
237 =Putnam
239 =Quitman
241 =Rabun
243 =Randolph
245 =Richmond
247 =Rockdale
249 =Schley
251 =Screven
253 =Seminole
255 =Spalding
257 =Stephens
259 =Stewart
261 =Sumter
263 =Talbot
265 =Taliaferro
267 =Tattnell
269 =Taylor
271 =Telfair
273 =Terrell
275 =Thomas
277 =Tift
279 =Toombs
281 =Townes
283 =Treutlen
285 =Troup
287 =Turner
289 =Twiggs
291 =Union
293 =Upson
295 =Walker
297 =Walton
299 =Ware
301 =Warren

303 =Washington
305 =Wayne
307 =Webster
309 =Wheeler
311 =White
313 =Whitfield
315 =Wilcox
317 =Wilkes
319 =Wilkinson
321 =Worth

HAWAII - 15

001 =Hawaii
003 =Honolulu
005 =Kalawao
007 =Kauai
009 =Maui

IDAHO - 16

001 =Ada
003 =Adams
005 =Bannock
007 =Bear Lake
009 =Benewah
011 =Bingham
013 =Blaine
015 =Boise
017 =Bonner
019 =Bonneville
021 =Boundary
023 =Butte
025 =Camas
027 =Canyon
029 =Caribou
031 =Cassia
033 =Clark
035 =Clearwater
037 =Custer
039 =Elmore
041 =Franklin

043 =Fremont
045 =Gem
047 =Gooding
049 =Idaho
051 =Jefferson
053 =Jerome
055 =Kootenai
057 =Latah
059 =Lemhi
061 =Lewis
063 =Lincoln
065 =Madison
067 =Minidoka
069 =Nez Perce
071 =Oneida
073 =Owyhee
075 =Payette
077 =Power
079 =Shoshone
081 =Teton
083 =Twin Falls
085 =Valley
087 =Washington

ILLINOIS - 17

001 =Adams
003 =Alexander
005 =Bond
007 =Boone
009 =Brown
011 =Bureau
013 =Calhoun
015 =Carroll
017 =Cass
019 =Champaign
021 =Christian
023 =Clark
025 =Clay
027 =Clinton
029 =Coles
031 =Cook
033 =Crawford

035 =Cumberland
037 =DeKalb
039 =De Witt
041 =Douglas
043 =DuPage
045 =Edgar
047 =Edwards
049 =Effingham
051 =Fayette
053 =Ford
055 =Franklin
057 =Fulton
059 =Gallatin
061 =Greene
063 =Grundy
065 =Hamilton
067 =Hancock
069 =Hardin
071 =Henderson
073 =Henry
075 =Iroquois
077 =Jackson
079 =Jasper
081 =Jefferson
083 =Jersey
085 =Jo Daviess
087 =Johnson
089 =Kane
091 =Kankakee
093 =Kendall
095 =Knox
097 =Lake
099 =La Salle
101 =Lawrence
103 =Lee
105 =Livingston
107 =Logan
109 =McDonough
111 =McHenry
113 =McLean
115 =Macon
117 =Macoupin
119 =Madison
121 =Marion

123 =Marshall
125 =Mason
127 =Massac
129 =Menard
131 =Mercer
133 =Monroe
135 =Montgomery
137 =Morgan
139 =Moultrie
141 =Ogle
143 =Peoria
145 =Perry
147 =Piatt
149 =Pike
151 =Pope
153 =Pulaski
155 =Putnam
157 =Randolph
159 =Richland
161 =Rock Island
163 =St. Clair
165 =Saline
167 =Sangamon
169 =Schuyler
171 =Scott
173 =Shelby
175 =Stark
177 =Stephenson
179 =Tazewell
181 =Union
183 =Vermilion
185 =Wabash
187 =Warren
189 =Washington
191 =Wayne
193 =White
195 =Whiteside
197 =Will
199 =Williamson
201 =Winnebago
203 =Woodford

INDIANA - 18

001 =Adams
003 =Allen
005 =Bartholomew
007 =Benton
009 =Blackford
011 =Boone
013 =Brown
015 =Carroll
017 =Cass
019 =Clark
021 =Clay
023 =Clinton
025 =Crawford
027 =Daviess
029 =Dearborn
031 =Decatur
033 =De Kalb
035 =Delaware
037 =Dubois
039 =Elkhart
041 =Fayette
043 =Floyd
045 =Fountain
047 =Franklin
049 =Fulton
051 =Gibson
053 =Grant
055 =Greene
057 =Hamilton
059 =Hancock
061 =Harrison
063 =Hendricks
065 =Henry
067 =Howard
069 =Huntington
071 =Jackson
073 =Jasper
075 =Jay
077 =Jefferson
079 =Jennings
081 =Johnson
083 =Knox
085 =Kosciusko
087 =Lagrange

089 =Lake
091 =La Porte
093 =Lawrence
095 =Madison
097 =Marion
099 =Marshall
101 =Martin
103 =Miami
105 =Monroe
107 =Montgomery
109 =Morgan
111 =Newton
113 =Noble
115 =Ohio
117 =Orange
119 =Owen
121 =Parke
123 =Perry
125 =Pike
127 =Porter
129 =Posey
131 =Pulaski
133 =Putnam
135 =Randolph
137 =Ripley
139 =Rush
141 =St. Joseph
143 =Scott
145 =Shelby
147 =Spencer
149 =Starke
151 =Steuben
153 =Sullivan
155 =Switzerland
157 =Tippecanoe
159 =Tipton
161 =Union
163 =Vanderburgh
165 =Vermillion
167 =Vigo
169 =Wabash
171 =Warren
173 =Warrick
175 =Washington

177 =Wayne
179 =Wells
181 =White
183 =Whitley

IOWA - 19

001 =Adair
003 =Adams
005 =Allamakee
007 =Appanoose
009 =Audubon
011 =Benton
013 =Black Hawk
015 =Boone
017 =Bremer
019 =Buchanan
021 =Buena Vista
023 =Butler
025 =Calhoun
027 =Carroll
029 =Cass
031 =Cedar
033 =Cerro Gordo
035 =Cherokee
037 =Chickasaw
039 =Clarke
041 =Clay
043 =Clayton
045 =Clinton
047 =Crawford
049 =Dallas
051 =Davis
053 =Decatur
055 =Delaware
057 =Des Moines
059 =Dickinson
061 =Dubuque
063 =Emmet
065 =Fayette
067 =Floyd
069 =Franklin
071 =Fremont

073 =Greene
075 =Grundy
077 =Guthrie
079 =Hamilton
081 =Hancock
083 =Hardin
085 =Harrison
087 =Henry
089 =Howard
091 =Humboldt
093 =Ida
095 =Iowa
097 =Jackson
099 =Jasper
101 =Jefferson
103 =Johnson
105 =Jones
107 =Keokuk
109 =Kossuth
111 =Lee
113 =Linn
115 =Louisa
117 =Lucas
119 =Lyon
121 =Madison
123 =Mahaska
125 =Marion
127 =Marshall
129 =Mills
131 =Mitchell
133 =Monona
135 =Monroe
137 =Montgomery
139 =Muscatine
141 =O'Brien
143 =Osceola
145 =Page
147 =Palo Alto
149 =Plymouth
151 =Pocahontas
153 =Polk
155 =Pottawattamie
157 =Poweshiek
159 =Ringgold

161 =Sac
163 =Scott
165 =Shelby
167 =Sioux
169 =Story
171 =Tama
173 =Taylor
175 =Union
177 =Van Buren
179 =Wapello
181 =Warren
183 =Washington
185 =Wayne
187 =Webster
189 =Winnebago
191 =Winneshiek
193 =Woodbury
195 =Worth
197 =Wright

KANSAS - 20

001 =Allen
003 =Anderson
005 =Atchison
007 =Barber
009 =Barton
011 =Bourbon
013 =Brown
015 =Butler
017 =Chase
019 =Chautauqua
021 =Cherokee
023 =Cheyenne
025 =Clark
027 =Clay
029 =Cloud
031 =Coffey
033 =Comanche
035 =Cowley
037 =Crawford
039 =Decatur
041 =Dickinson

043 =Doniphan
045 =Douglas
047 =Edwards
049 =Elk
051 =Ellis
053 =Ellsworth
055 =Finney
057 =Ford
059 =Franklin
061 =Geary
063 =Gove
065 =Graham
067 =Grant
069 =Gray
071 =Greeley
073 =Greenwood
075 =Hamilton
077 =Harper
079 =Harvey
081 =Haskell
083 =Hodgeman
085 =Jackson
087 =Jefferson
089 =Jewell
091 =Johnson
093 =Kearny
095 =Kingman
097 =Kiowa
099 =Labette
101 =Lane
103 =Leavenworth
105 =Lincoln
107 =Linn
109 =Logan
111 =Lyon
113 =McPherson
115 =Marion
117 =Marshall
119 =Meade
121 =Miami
123 =Mitchell
125 =Montgomery
127 =Morris
129 =Morton

131 =Nemaha	001 =Adair
133 =Neosho	003 =Allen
135 =Ness	005 =Anderson
137 =Norton	007 =Ballard
139 =Osage	009 =Barren
141 =Osborne	011 =Bath
143 =Ottawa	013 =Bell
145 =Pawnee	015 =Boone
147 =Phillips	017 =Bourbon
149 =Pottawatomie	019 =Boyd
151 =Pratt	021 =Boyle
153 =Rawlins	023 =Bracken
155 =Reno	025 =Breathitt
157 =Republic	027 =Breckinridge
159 =Rice	029 =Bullitt
161 =Riley	031 =Butler
163 =Rooks	033 =Caldwell
165 =Rush	035 =Calloway
167 =Russell	037 =Campbell
169 =Saline	039 =Carlisle
171 =Scott	041 =Carroll
173 =Sedgwick	043 =Carter
175 =Seward	045 =Casey
177 =Shawnee	047 =Christian
179 =Sheridan	049 =Clark
181 =Sherman	051 =Clay
183 =Smith	053 =Clinton
185 =Stafford	055 =Crittenden
187 =Stanton	057 =Cumberland
189 =Stevens	059 =Davies
191 =Sumner	
193 =Thomas	
195 =Trego	
197 =Wabaunsee	
199 =Wallace	
201 =Washington	
203 =Wichita	
205 =Wilson	
207 =Woodson	
209 =Wyandotte	

KENTUCKY - 21

061 =Edmonson
063 =Elliott
065 =Estill
067 =Fayette
069 =Fleming
071 =Floyd
073 =Franklin
075 =Fulton
077 =Gallatin
079 =Garrard
081 =Grant
083 =Graves
085 =Grayson
087 =Green
089 =Greenup
091 =Hancock
093 =Hardin
095 =Harlan
097 =Harrison
099 =Hart
101 =Henderson
103 =Henry
105 =Hickman
107 =Hopkins
109 =Jackson
111 =Jefferson
113 =Jessamine
115 =Johnson
117 =Kenton
119 =Knott
121 =Knox
123 =Larue
125 =Laurel
127 =Lawrence
129 =Lee
131 =Leslie
133 =Letcher
135 =Lewis
137 =Lincoln
139 =Livingston
141 =Logan
143 =Lyon
145 =McCracken
147 =McCreary

149 =McLean
151 =Madison
153 =Magoffin
155 =Marion
157 =Marshall
159 =Martin
161 =Mason
163 =Meade
165 =Menifee
167 =Mercer
169 =Metcalf
171 =Monroe
173 =Montgomery
175 =Morgan
177 =Muhlenberg
179 =Nelson
181 =Nicholas
183 =Ohio
185 =Oldham
187 =Owen
189 =Owsley
191 =Pendleton
193 =Perry
195 =Pike
197 =Powell
199 =Pulaski
201 =Robertson
203 =Rockcastle
205 =Rowan
207 =Russell
209 =Scott
211 =Shelby
213 =Simpson
215 =Spencer
217 =Taylor
219 =Todd
221 =Trigg
223 =Trimble
225 =Union
227 =Warren
229 =Washington
231 =Wayne
233 =Webster
235 =Whitley

237 =Wolfe
239 =Woodford

LOUISIANA - 22

001 =Acadia
003 =Allen
005 =Ascension
007 =Assumption
009 =Avoyelles
011 =Beauregard
013 =Bienville
015 =Bossier
017 =Caddo
019 =Calcasieu
021 =Caldwell
023 =Cameron
025 =Catahoula
027 =Claiborne
029 =Concordia
031 =De Soto
033 =East Baton Rouge
035 =East Carroll
037 =East Feliciana
039 =Evangeline
041 =Franklin
043 =Grant
045 =Iberia
047 =Iberville
049 =Jackson
051 =Jefferson
053 =Jefferson Davis
055 =Lafayette
057 =Lafourche
059 =La Salle
061 =Lincoln
063 =Livingston
065 =Madison
067 =Morehouse
069 =Natchitoches
071 =Orleans
073 =Ouachita
075 =Plaquemines

077 =Pointe Coupee
079 =Rapides
081 =Red River
083 =Richland
085 =Sabine
087 =St. Bernard
089 =St. Charles
091 =St. Helena
093 =St. James
095 =St. John the Baptist
097 =St. Landry
099 =St. Martin
101 =St. Mary
103 =St. Tammany
105 =Tangipahoa
107 =Tensas
109 =Terrebonne
111 =Union
113 =Vermilion
115 =Vernon
117 =Washington
119 =Webster
121 =West Baton Rouge
123 =West Carroll
125 =West Feliciana
127 =Winn

MAINE - 23

001 =Androscoggin
003 =Aroostook
005 =Cumberland
007 =Franklin
009 =Hancock
011 =Kennebec
013 =Knox
015 =Lincoln
017 =Oxford
019 =Penobscot
021 =Piscataquis
023 =Sagadahoc
025 =Somerset
027 =Waldo

029 =Washington
031 =York

MARYLAND - 24

001 =Allegany
003 =Anne Arundel
005 =Baltimore
009 =Calvert
011 =Caroline
013 =Carroll
015 =Cecil
017 =Charles
019 =Dorchester
021 =Frederick
023 =Garrett
025 =Harford
027 =Howard
029 =Kent
031 =Montgomery
033 =Prince George's
035 =Queen Anne's
037 =St. Mary's
039 =Somerset
041 =Talbot
043 =Washington
045 =Wicomico
047 =Worcester
510 =Baltimore

MASSACHUSETTS - 25

001 =Barnstable
003 =Berkshire
005 =Bristol
007 =Dukes
009 =Essex
011 =Franklin
013 =Hampden
015 =Hampshire
017 =Middlesex
019 =Nantucket

021 =Norfolk
023 =Plymouth
025 =Suffolk
027 =Worcester

MICHIGAN - 26

001 =Alcona
003 =Alger
005 =Allegan
007 =Alpena
009 =Antrim
011 =Arenac
013 =Baraga
015 =Barry
017 =Bay
019 =Benzie
021 =Berrien
023 =Branch
025 =Calhoun
027 =Cass
029 =Charlevoix
031 =Cheboygan
033 =Chippewa
035 =Clare
037 =Clinton
039 =Crawford
041 =Delta
043 =Dickinson
045 =Eaton
047 =Emmet
049 =Genesee
051 =Gladwin
053 =Gogebic
055 =Grand Traverse
057 =Gratiot
059 =Hillsdale
061 =Houghton
063 =Huron
065 =Ingham
067 =Ionia
069 =Iosco
071 =Iron

073 =Isabella
075 =Jackson
077 =Kalamazoo
079 =Kalkaska
081 =Kent
083 =Keweenaw
085 =Lake
087 =Lapeer
089 =Leelanau
091 =Lenawee
093 =Livingston
095 =Luce
097 =Mackinac
099 =Macomb
101 =Manistee
103 =Marquette
105 =Mason
107 =Mecosta
109 =Menominee
111 =Midland
113 =Missaukee
115 =Monroe
117 =Montcalm
119 =Montmorency
121 =Muskegon
123 =Newaygo
125 =Oakland
127 =Oceana
129 =Ogemaw
131 =Ontonagon
133 =Osceola
135 =Oscoda
137 =Otsego
139 =Ottawa
141 =Presque Isle
143 =Roscommon
145 =Saginaw
147 =St. Clair
149 =St. Joseph
151 =Sanilac
153 =Schoolcraft
155 =Shiawassee
157 =Tuscola
159 =Van Buren

161 =Washtenaw
163 =Wayne
165 =Wexford

MINNESOTA - 27

001 =Aitkin
003 =Anoka
005 =Becker
007 =Beltrami
009 =Benton
011 =Big Stone
013 =Blue Earth
015 =Brown
017 =Carlton
019 =Carver
021 =Cass
023 =Chippewa
025 =Chisago
027 =Clay
029 =Clearwater
031 =Cook
033 =Cottonwood
035 =Crow Wing
037 =Dakota
039 =Dodge
041 =Douglas
043 =Faribault
045 =Fillmore
047 =Freeborn
049 =Goodhue
051 =Grant
053 =Hennepin
055 =Houston
057 =Hubbard
059 =Isanti
061 =Itasca
063 =Jackson
065 =Kanabec
067 =Kandiyohi
069 =Kittson
071 =Koochiching
073 =Lac qui Parle

075 =Lake
077 =Lake of the Woods
079 =Le Sueur
081 =Lincoln
083 =Lyon
085 =McLeod
087 =Mahnomen
089 =Marshall
091 =Martin
093 =Meeker
095 =Mille Lacs
097 =Morrison
099 =Mower
101 =Murray
103 =Nicollet
105 =Nobles
107 =Norman
109 =Olmsted
111 =Otter Tail
113 =Pennington
115 =Pine
117 =Pipestone
119 =Polk
121 =Pope
123 =Ramsey
125 =Red Lake
127 =Redwood
129 =Renville
131 =Rice
133 =Rock
135 =Roseau
137 =St. Louis
139 =Scott
141 =Sherburne
143 =Sibley
145 =Stearns
147 =Steele
149 =Stevens
151 =Swift
153 =Todd
155 =Traverse
157 =Wabasha
159 =Wadena
161 =Waseca

163 =Washington
165 =Watowan
167 =Wilkin
169 =Winona
171 =Wright
173 =Yellow Medicine

MISSISSIPPI - 28

001 =Adams
003 =Alcorn
005 =Amite
007 =Attala
009 =Benton
011 =Bolivar
013 =Calhoun
015 =Carroll
017 =Chickasaw
019 =Choctaw
021 =Claiborne
023 =Clarke
025 =Clay
027 =Coahoma
029 =Copiah
031 =Covington
033 =DeSoto
035 =Forrest
037 =Franklin
039 =George
041 =Greene
043 =Grenada
045 =Hancock
047 =Harrison
049 =Hinds
051 =Holmes
053 =Humphreys
055 =Issaquena
057 =Itawamba
059 =Jackson
061 =Jasper
063 =Jefferson
065 =Jefferson Davis
067 =Jones

069 =Kemper
071 =Lafayette
073 =Lamar
075 =Lauderdale
077 =Lawrence
079 =Leake
081 =Lee
083 =Leflore
085 =Lincoln
087 =Lowndes
089 =Madison
091 =Marion
093 =Marshall
095 =Monroe
097 =Montgomery
099 =Neshoba
101 =Newton
103 =Noxubee
105 =Oktibbeha
107 =Panola
109 =Pearl River
111 =Perry
113 =Pike
115 =Pontotoc
117 =Prentiss
119 =Quitman
121 =Rankin
123 =Scott
125 =Sharkey
127 =Simpson
129 =Smith
131 =Stone
133 =Sunflower
135 =Tallahatchie
137 =Tate
139 =Tippah
141 =Tishomingo
143 =Tunica
145 =Union
147 =Walthall
149 =Warren
151 =Washington
153 =Wayne
155 =Webster

157 =Wilkinson
159 =Winston
161 =Yalobusha
163 =Yazoo

MISSOURI - 29

001 =Adair
003 =Andrew
005 =Atchison
007 =Audrain
009 =Barry
011 =Barton
013 =Bates
015 =Benton
017 =Bollinger
019 =Boone
021 =Buchanan
023 =Butler
025 =Caldwell
027 =Callaway
029 =Camden
031 =Cape Girardeau
033 =Carroll
035 =Carter
037 =Cass
039 =Cedar
041 =Chariton
043 =Christian
045 =Clark
047 =Clay
049 =Clinton
051 =Cole
053 =Cooper
055 =Crawford
057 =Dade
059 =Dallas
061 =Daviess
063 =DeKalb
065 =Dent
067 =Douglas
069 =Dunklin
071 =Franklin

073 =Gasconade
075 =Gentry
077 =Greene
079 =Grundy
081 =Harrison
083 =Henry
085 =Hickory
087 =Holt
089 =Howard
091 =Howell
093 =Iron
095 =Jackson
097 =Jasper
099 =Jefferson
101 =Johnson
103 =Knox
105 =Laclede
107 =Lafayette
109 =Lawrence
111 =Lewis
113 =Lincoln
115 =Linn
117 =Livingston
119 =McDonald
121 =Macon
123 =Madison
125 =Maries
127 =Marion
129 =Mercer
131 =Miller
133 =Mississippi
135 =Moniteau
137 =Monroe
139 =Montgomery
141 =Morgan
143 =New Madrid
145 =Newton
147 =Nodaway
149 =Oregon
151 =Osage
153 =Ozark
155 =Pemiscot
157 =Perry
159 =Pettis

161 =Phelps
163 =Pike
165 =Platte
167 =Polk
169 =Pulaski
171 =Putnam
173 =Ralls
175 =Randolph
177 =Ray
179 =Reynolds
181 =Ripley
183 =St. Charles
185 =St. Clair
186 =Ste. Genevieve
187 =St. Francois
189 =St. Louis
195 =Saline
197 =Schuyler
199 =Scotland
201 =Scott
203 =Shannon
205 =Shelby
207 =Stoddard
209 =Stone
211 =Sullivan
213 =Taney
215 =Texas
217 =Vernon
219 =Warren
221 =Washington
223 =Wayne
225 =Webster
227 =Worth
229 =Wright
510 =St. Louis

MONTANA - 30

001 =Beaverhead
003 =Big Horn
005 =Blaine
007 =Broadwater
009 =Carbon

011 =Carter
013 =Cascade
015 =Chouteau
017 =Custer
019 =Daniels
021 =Dawson
023 =Deer Lodge
025 =Fallon
027 =Fergus
029 =Flathead
031 =Gallatin
033 =Garfield
035 =Glacier
037 =Golden Valley
039 =Granite
041 =Hill
043 =Jefferson
045 =Judith Basin
047 =Lake
049 =Lewis and Clark
051 =Liberty
053 =Lincoln
055 =McCone
057 =Madison
059 =Meagher
061 =Mineral
063 =Missoula
065 =Musselshell
067 =Park
069 =Petroleum
071 =Phillips
073 =Pondera
075 =Powder River
077 =Powell
079 =Prairie
081 =Ravalli
083 =Richland
085 =Roosevelt
087 =Rosebud
089 =Sanders
091 =Sheridan
093 =Silver Bow
095 =Stillwater
097 =Sweet Grass

099 =Teton
101 =Toole
103 =Treasure
105 =Valley
107 =Wheatland
109 =Wibaux
111 =Yellowstone
113 =Yellowstone National

NEBRASKA - 31

001 =Adams
003 =Antelope
005 =Arthur
007 =Banner
009 =Blaine
011 =Boone
013 =Box Butte
015 =Boyd
017 =Brown
019 =Buffalo
021 =Burt
023 =Butler
025 =Cass
027 =Cedar
029 =Chase
031 =Cherry
033 =Cheyenne
035 =Clay
037 =Colfax
039 =Cuming
041 =Custer
043 =Dakota
045 =Dawes
047 =Dawson
049 =Deuel
051 =Dixon
053 =Dodge
055 =Douglas
057 =Dundy
059 =Fillmore
061 =Franklin
063 =Frontier

065 =Furnas
067 =Gage
069 =Garden
071 =Garfield
073 =Gosper
075 =Grant
077 =Greeley
079 =Hall
081 =Hamilton
083 =Harlan
085 =Hayes
087 =Hitchcock
089 =Holt
091 =Hooker
093 =Howard
095 =Jefferson
097 =Johnson
099 =Kearney
101 =Keith
103 =Keya Paha
105 =Kimball
107 =Knox
109 =Lancaster
111 =Lincoln
113 =Logan
115 =Loup
117 =McPherson
119 =Madison
121 =Merrick
123 =Morrill
125 =Nance
127 =Nemaha
129 =Nuckolls
131 =Otoe
133 =Pawnee
135 =Perkins
137 =Phelps
139 =Pierce
141 =Platte
143 =Polk
145 =Red Willow
147 =Richardson
149 =Rock
151 =Saline

153 =Sarpy
155 =Saunders
157 =Scotts Bluff
159 =Seward
161 =Sheridan
163 =Sherman
165 =Sioux
167 =Stanton
169 =Thayer
171 =Thomas
173 =Thurston
175 =Valley
177 =Washington
179 =Wayne
181 =Webster
183 =Wheeler
185 =York

NEVADA - 32

001 =Churchill
003 =Clark
005 =Douglas
007 =Elko
009 =Esmeralda
011 =Eureka
013 =Humboldt
015 =Lander
017 =Lincoln
019 =Lyon
021 =Mineral
023 =Nye
027 =Pershing
029 =Storey
031 =Washoe
033 =White Pine
510 =Carson

NEW HAMPSHIRE - 33

001 =Belknap
003 =Carroll

005 =Cheshire
007 =Coos
009 =Grafton
011 =Hillsborough
013 =Merrimack
015 =Rockingham
017 =Strafford
019 =Sullivan

NEW JERSEY - 34

001 =Atlantic
003 =Bergen
005 =Burlington
007 =Camden
009 =Cape May
011 =Cumberland
013 =Essex
015 =Gloucester
017 =Hudson
019 =Hunterdon
021 =Mercer
023 =Middlesex
025 =Monmouth
027 =Morris
029 =Ocean
031 =Passaic
033 =Salem
035 =Somerset
037 =Sussex
039 =Union
041 =Warren

NEW MEXICO - 35

001 =Bernalillo
003 =Catron
005 =Chaves
006 =Cibola
007 =Colfax
009 =Curry
011 =DeBaca

013 =Dona Ana
015 =Eddy
017 =Grant
019 =Guadalupe
021 =Harding
023 =Hidalgo
025 =Lea
027 =Lincoln
028 =Los Alamos
029 =Luna
031 =McKinley
033 =Mora
035 =Otero
037 =Quay
039 =Rio Arriba
041 =Roosevelt
043 =Sandoval
045 =San Juan
047 =San Miguel
049 =Santa Fe
051 =Sierra
053 =Socorro
055 =Taos
057 =Torrance
059 =Union
061 =Valencia

NEW YORK - 36

001 =Albany
003 =Allegany
005 =Bronx
007 =Broome
009 =Cattaraugus
011 =Cayuga
013 =Chautauqua
015 =Chemung
017 =Chenango
019 =Clinton
021 =Columbia
023 =Cortland
025 =Delaware
027 =Dutchess

029 =Erie
031 =Essex
033 =Franklin
035 =Fulton
037 =Genesee
039 =Greene
041 =Hamilton
043 =Herkimer
045 =Jefferson
047 =Kings
049 =Lewis
051 =Livingston
053 =Madison
055 =Monroe
057 =Montgomery
059 =Nassau
061 =New York
063 =Niagara
065 =Oneida
067 =Onondaga
069 =Ontario
071 =Orange
073 =Orleans
075 =Oswego
077 =Otsego
079 =Putnam
081 =Queens
083 =Rensselaer
085 =Richmond
087 =Rockland
089 =St. Lawrence
091 =Saratoga
093 =Schenectady
095 =Schoharie
097 =Schuyler
099 =Seneca
101 =Steuben
103 =Suffolk
105 =Sullivan
107 =Tioga
109 =Tompkins
111 =Ulster
113 =Warren
115 =Washington

117 =Wayne
119 =Westchester
121 =Wyoming
123 =Yates

NORTH CAROLINA - 37

001 =Alamance
003 =Alexander
005 =Alleghany
007 =Anson
009 =Ashe
011 =Avery
013 =Beaufort
015 =Bertie
017 =Bladen
019 =Brunswick
021 =Buncombe
023 =Burke
025 =Cabarrus
027 =Caldwell
029 =Camden
031 =Carteret
033 =Caswell
035 =Catawba
037 =Chatham
039 =Cherokee
041 =Chowan
043 =Clay
045 =Cleveland
047 =Columbus
049 =Craven
051 =Cumberland
053 =Currituck
055 =Dare
057 =Davidson
059 =Davie
061 =Duplin
063 =Durham
065 =Edgecombe
067 =Forsyth
069 =Franklin
071 =Gaston

073 =Gates
075 =Graham
077 =Granville
079 =Greene
081 =Guilford
083 =Halifax
085 =Harnett
087 =Haywood
089 =Henderson
091 =Hertford
093 =Hoke
095 =Hyde
097 =Iredell
099 =Jackson
101 =Johnston
103 =Jones
105 =Lee
107 =Lenoir
109 =Lincoln
111 =McDowell
113 =Macon
115 =Madison
117 =Martin
119 =Mecklenburg
121 =Mitchell
123 =Montgomery
125 =Moore
127 =Nash
129 =New Hanover
131 =Northampton
133 =Onslow
135 =Orange
137 =Pamlico
139 =Pasquotank
141 =Pender
143 =Perquimans
145 =Person
147 =Pitt
149 =Polk
151 =Randolph
153 =Richmond
155 =Robeson
157 =Rockingham
159 =Rowan

161 =Rutherford
163 =Sampson
165 =Scotland
167 =Stanly
169 =Stokes
171 =Surry
173 =Swain
175 =Transylvania
177 =Tyrrell
179 =Union
181 =Vance
183 =Wake
185 =Warren
187 =Washington
189 =Watauga
191 =Wayne
193 =Wilkes
195 =Wilson
197 =Yadkin
199 =Yancey

NORTH DAKOTA - 38

001 =Adams
003 =Barnes
005 =Benson
007 =Billings
009 =Bottineau
011 =Bowman
013 =Burke
015 =Burleigh
017 =Cass
019 =Cavalier
021 =Dickey
023 =Divide
025 =Dunn
027 =Eddy
029 =Emmons
031 =Foster
033 =Golden Valley
035 =Grand Forks
037 =Grant
039 =Griggs

041 =Hettinger
043 =Kidder
045 =LaMoure
047 =Logan
049 =McHenry
051 =McIntosh
053 =McKenzie
055 =McLean
057 =Mercer
059 =Morton
061 =Mountrail
063 =Nelson
065 =Oliver
067 =Pembina
069 =Pierce
071 =Ramsey
073 =Ransom
075 =Renville
077 =Richland
079 =Rolette
081 =Sargent
083 =Sheridan
085 =Sioux
087 =Slope
089 =Stark
091 =Steele
093 =Stutsman
095 =Towner
097 =Traill
099 =Walsh
101 =Ward
103 =Wells
105 =Williams

OHIO - 39

001 =Adams
003 =Allen
005 =Ashland
007 =Ashtabula
009 =Athens
011 =Auglaize
013 =Belmont

015 =Brown
017 =Butler
019 =Carroll
021 =Champaign
023 =Clark
025 =Clermont
027 =Clinton
029 =Columbiana
031 =Coshocton
033 =Crawford
035 =Cuyahoga
037 =Darke
039 =Defiance
041 =Delaware
043 =Erie
045 =Fairfield
047 =Fayette
049 =Franklin
051 =Fulton
053 =Gallia
055 =Geauga
057 =Greene
059 =Guernsey
061 =Hamilton
063 =Hancock
065 =Hardin
067 =Harrison
069 =Henry
071 =Highland
073 =Hocking
075 =Holmes
077 =Huron
079 =Jackson
081 =Jefferson
083 =Knox
085 =Lake
087 =Lawrence
089 =Licking
091 =Logan
093 =Lorain
095 =Lucas
097 =Madison
099 =Mahoning
101 =Marion

103 =Medina
105 =Meigs
107 =Mercer
109 =Miami
111 =Monroe
113 =Montgomery
115 =Morgan
117 =Morrow
119 =Muskingum
121 =Noble
123 =Ottawa
125 =Paulding
127 =Perry
129 =Pickaway
131 =Pike
133 =Portage
135 =Preble
137 =Putnam
139 =Richland
141 =Ross
143 =Sandusky
145 =Scioto
147 =Seneca
149 =Shelby
151 =Stark
153 =Summit
155 =Trumbull
157 =Tuscarawas
159 =Union
161 =Van Wert
163 =Vinton
165 =Warren
167 =Washington
169 =Wayne
171 =Williams
173 =Wood
175 =Wyandot

OKLAHOMA - 40

001 =Adair
003 =Alfalfa
005 =Atoka

007 =Beaver
009 =Beckham
011 =Blaine
013 =Bryan
015 =Caddo
017 =Canadian
019 =Carter
021 =Cherokee
023 =Choctaw
025 =Cimarron
027 =Cleveland
029 =Coal
031 =Comanche
033 =Cotton
035 =Craig
037 =Creek
039 =Custer
041 =Delaware
043 =Dewey
045 =Ellis
047 =Garfield
049 =Garvin
051 =Grady
053 =Grant
055 =Greer
057 =Harmon
059 =Harper
061 =Haskell
063 =Hughes
065 =Jackson
067 =Jefferson
069 =Johnston
071 =Kay
073 =Kingfisher
075 =Kiowa
077 =Latimer
079 =Le Flore
081 =Lincoln
083 =Logan
085 =Love
087 =McClain
089 =McCurtain
091 =McIntosh
093 =Major

095 =Marshall
097 =Mayes
099 =Murray
101 =Muskogee
103 =Noble
105 =Nowata
107 =Okfuskee
109 =Oklahoma
111 =Okmulgee
113 =Osage
115 =Ottawa
117 =Pawnee
119 =Payne
121 =Pittsburg
123 =Pontotoc
125 =Pottawatomie
127 =Pushmataha
129 =Roger Mills
131 =Rogers
133 =Seminole
135 =Sequoyah
137 =Stephens
139 =Texas
141 =Tillman
143 =Tulsa
145 =Wagoner
147 =Washington
149 =Washita
151 =Woods
153 =Woodward

OREGON - 41

001 =Baker
003 =Benton
005 =Clackamas
007 =Clatsop
009 =Columbia
011 =Coos
013 =Crook
015 =Curry
017 =Deschutes
019 =Douglas

021 =Gilliam
023 =Grant
025 =Harney
027 =Hood River
029 =Jackson
031 =Jefferson
033 =Josephine
035 =Klamath
037 =Lake
039 =Lane
041 =Lincoln
043 =Linn
045 =Malheur
047 =Marion
049 =Morrow
051 =Multnomah
053 =Polk
055 =Sherman
057 =Tillamook
059 =Umatilla
061 =Union
063 =Wallowa
065 =Wasco
067 =Washington
069 =Wheeler
071 =Yamhill

PENNSYLVANIA - 42

001 =Adams
003 =Allegheny
005 =Armstrong
007 =Beaver
009 =Bedford
011 =Berks
013 =Blair
015 =Bradford
017 =Bucks
019 =Butler
021 =Cambria
023 =Cameron
025 =Carbon
027 =Centre

029 =Chester
031 =Clarion
033 =Clearfield
035 =Clinton
037 =Columbia
039 =Crawford
041 =Cumberland
043 =Dauphin
045 =Delaware
047 =Elk
049 =Erie
051 =Fayette
053 =Forest
055 =Franklin
057 =Fulton
059 =Greene
061 =Huntingdon
063 =Indiana
065 =Jefferson
067 =Juniata
069 =Lackawanna
071 =Lancaster
073 =Lawrence
075 =Lebanon
077 =Lehigh
079 =Luzerne
081 =Lycoming
083 =Mc Kean
085 =Mercer
087 =Mifflin
089 =Monroe
091 =Montgomery
093 =Montour
095 =Northampton
097 =Northumberland
099 =Perry
101 =Philadelphia
103 =Pike
105 =Potter
107 =Schuylkill
109 =Snyder
111 =Somerset
113 =Sullivan
115 =Susquehanna

117 =Tioga
119 =Union
121 =Venango
123 =Warren
125 =Washington
127 =Wayne
129 =Westmoreland
131 =Wyoming
133 =York

RHODE ISLAND - 44

001 =Bristol
003 =Kent
005 =Newport
007 =Providence
009 =Washington

SOUTH CAROLINA - 45

001 =Abbeville
003 =Aiken
005 =Allendale
007 =Anderson
009 =Bamberg
011 =Barnwell
013 =Beaufort
015 =Berkeley
017 =Calhoun
019 =Charleston
021 =Cherokee
023 =Chester
025 =Chesterfield
027 =Clarendon
029 =Colleton
031 =Darlington
033 =Dillon
035 =Dorchester
037 =Edgefield
039 =Fairfield
041 =Florence
043 =Georgetown

045 =Greenville
047 =Greenwood
049 =Hampton
051 =Horry
053 =Jasper
055 =Kershaw
057 =Lancaster
059 =Laurens
061 =Lee
063 =Lexington
065 =McCormick
067 =Marion
069 =Marlboro
071 =Newberry
073 =Oconee
075 =Orangeburg
077 =Pickens
079 =Richland
081 =Saluda
083 =Spartanburg
085 =Sumter
087 =Union
089 =Williamsburg
091 =York

SOUTH DAKOTA - 46

003 =Aurora
005 =Beadle
007 =Bennett
009 =Bon Homme
011 =Brookings
013 =Brown
015 =Brule
017 =Buffalo
019 =Butte
021 =Campbell
023 =Charles Mix
025 =Clark
027 =Clay
029 =Codington
031 =Corson
033 =Custer

035 =Davison
037 =Day
039 =Deuel
041 =Dewey
043 =Douglas
045 =Edmunds
047 =Fall River
049 =Faulk
051 =Grant
053 =Gregory
055 =Haakon
057 =Hamlin
059 =Hand
061 =Hanson
063 =Harding
065 =Hughes
067 =Hutchinson
069 =Hyde
071 =Jackson
073 =Jerauld
075 =Jones
077 =Kingsbury
079 =Lake
081 =Lawrence
083 =Lincoln
085 =Lyman
087 =McCook
089 =McPherson
091 =Marshall
093 =Meade
095 =Mellette
097 =Miner
099 =Minnehaha
101 =Moody
103 =Pennington
105 =Perkins
107 =Potter
109 =Roberts
111 =Sanborn
113 =Shannon
115 =Spink
117 =Stanley
119 =Sully
121 =Todd

123 =Tripp
125 =Turner
127 =Union
129 =Walworth
135 =Yankton
137 =Ziebach

TENNESSEE - 47

001 =Anderson
003 =Bedford
005 =Benton
007 =Bledsoe
009 =Blount
011 =Bradley
013 =Campbell
015 =Cannon
017 =Carroll
019 =Carter
021 =Cheatham
023 =Chester
025 =Claiborne
027 =Clay
029 =Cocke
031 =Coffee
033 =Crockett
035 =Cumberland
037 =Davidson
039 =Decatur
041 =DeKalb
043 =Dickson
045 =Dyer
047 =Fayette
049 =Fentress
051 =Franklin
053 =Gibson
055 =Giles
057 =Grainger
059 =Greene
061 =Grundy
063 =Hamblen
065 =Hamilton
067 =Hancock
069 =Hardeman

071 =Hardin
073 =Hawkins
075 =Haywood
077 =Henderson
079 =Henry
081 =Hickman
083 =Houston
085 =Humphreys
087 =Jackson
089 =Jefferson
091 =Johnson
093 =Knox
095 =Lake
097 =Lauderdale
099 =Lawrence
101 =Lewis
103 =Lincoln
105 =Loudon
107 =McMinn
109 =McNairy
111 =Macon
113 =Madison
115 =Marion
117 =Marshall
119 =Maury
121 =Meigs
123 =Monroe
125 =Montgomery
127 =Moore
129 =Morgan
131 =Obion
133 =Overton
135 =Perry
137 =Pickett
139 =Polk
141 =Putnam
143 =Rhea
145 =Roane
147 =Robertson
149 =Rutherford
151 =Scott
153 =Sequatchie
155 =Sevier
157 =Shelby

159 =Smith
161 =Stewart
163 =Sullivan
165 =Sumner
167 =Tipton
169 =Trousdale
171 =Unicoi
173 =Union
175 =Van Buren
177 =Warren
179 =Washington
181 =Wayne
183 =Weakley
185 =White
187 =Williamson
189 =Wilson

TEXAS - 48

001 =Anderson
003 =Andrews
005 =Angelina
007 =Aransas
009 =Archer
011 =Armstrong
013 =Atascosa
015 =Austin
017 =Bailey
019 =Bandera
021 =Bastrop
023 =Baylor
025 =Bee
027 =Bell
029 =Bexar
031 =Blanco
033 =Borden
035 =Bosque
037 =Bowie
039 =Brazoria
041 =Brazos
043 =Brewster
045 =Briscoe
047 =Brooks

049 =Brown
051 =Burleson
053 =Burnet
055 =Caldwell
057 =Calhoun
059 =Callahan
061 =Cameron
063 =Camp
065 =Carson
067 =Cass
069 =Castro
071 =Chambers
073 =Cherokee
075 =Childress
077 =Clay
079 =Cochran
081 =Coke
083 =Coleman
085 =Collin
087 =Collingsworth
089 =Colorado
091 =Comal
093 =Comanche
095 =Concho
097 =Cooke
099 =Coryell
101 =Cottle
103 =Crane
105 =Crockett
107 =Crosby
109 =Culberson
111 =Dallam
113 =Dallas
115 =Dawson
117 =Deaf Smith
119 =Delta
121 =Denton
123 =DeWitt
125 =Dickens
127 =Dimmit
129 =Donley
131 =Duval
133 =Eastland
135 =Ector

137 =Edwards
139 =Ellis
141 =El Paso
143 =Erath
145 =Falls
147 =Fannin
149 =Fayette
151 =Fisher
153 =Floyd
155 =Foard
157 =Fort Bend
159 =Franklin
161 =Freestone
163 =Frio
165 =Gaines
167 =Galveston
169 =Garza
171 =Gillespie
173 =Glasscock
175 =Goliad
177 =Gonzales
179 =Gray
181 =Grayson
183 =Gregg
185 =Grimes
187 =Guadalupe
189 =Hale
191 =Hall
193 =Hamilton
195 =Hansford
197 =Hardeman
199 =Hardin
201 =Harris
203 =Harrison
205 =Hartley
207 =Haskell
209 =Hays
211 =Hemphill
213 =Henderson
215 =Hidalgo
217 =Hill
219 =Hockley
221 =Hood
223 =Hopkins

225 =Houston	313 =Madison	401 =Rusk
227 =Howard	315 =Marion	403 =Sabine
229 =Hudspeth	317 =Martin	405 =San Augustine
231 =Hunt	319 =Mason	407 =San Jacinto
233 =Hutchinson	321 =Matagorda	409 =San Patricio
235 =Irion	323 =Maverick	411 =San Saba
237 =Jack	325 =Medina	413 =Schleicher
239 =Jackson	327 =Menard	415 =Scurry
241 =Jasper	329 =Midland	417 =Shackelford
243 =Jeff Davis	331 =Milam	419 =Shelby
245 =Jefferson	333 =Mills	421 =Sherman
247 =Jim Hogg	335 =Mitchell	423 =Smith
249 =Jim Wells	337 =Montague	425 =Somervell
251 =Johnson	339 =Montgomery	427 =Starr
253 =Jones	341 =Moore	429 =Stephens
255 =Karnes	343 =Morris	431 =Sterling
257 =Kaufman	345 =Motley	433 =Stonewall
259 =Kendall	347 =Nacogdoches	435 =Sutton
261 =Kenedy	349 =Navarro	437 =Swisher
263 =Kent	351 =Newton	439 =Tarrant
265 =Kerr	353 =Nolan	441 =Taylor
267 =Kimble	355 =Nueces	443 =Terrell
269 =King	357 =Ochiltree	445 =Terry
271 =Kinney	359 =Oldham	447 =Throckmorton
273 =Kleberg	361 =Orange	449 =Titus
275 =Knox	363 =Palo Pinto	451 =Tom Green
277 =Lamar	365 =Panola	453 =Travis
279 =Lamb	367 =Parker	455 =Trinity
281 =Lampasas	369 =Parmer	457 =Tyler
283 =La Salle	371 =Pecos	459 =Upshur
285 =Lavaca	373 =Polk	461 =Upton
287 =Lee	375 =Potter	463 =Uvalde
289 =Leon	377 =Presidio	465 =Val Verde
291 =Liberty	379 =Rains	467 =Van Zandt
293 =Limestone	381 =Randall	469 =Victoria
295 =Lipscomb	383 =Reagan	471 =Walker
297 =Live Oak	385 =Real	473 =Waller
299 =Llano	387 =Red River	475 =Ward
301 =Loving	389 =Reeves	477 =Washington
303 =Lubbock	391 =Refugio	479 =Webb
305 =Lynn	393 =Roberts	481 =Wharton
307 =McCulloch	395 =Robertson	483 =Wheeler
309 =McLennan	397 =Rockwall	485 =Wichita
311 =McMullen	399 =Runnels	487 =Wilbarger

489 =Willacy
491 =Williamson
493 =Wilson
495 =Winkler
497 =Wise
499 =Wood
501 =Yoakum
503 =Young
505 =Zapata
507 =Zavala

UTAH - 49

001 =Beaver
003 =Box Elder
005 =Cache
007 =Carbon
009 =Daggett
011 =Davis
013 =Duchesne
015 =Emery
017 =Garfield
019 =Grand
021 =Iron
023 =Juab
025 =Kane
027 =Millard
029 =Morgan
031 =Piute
033 =Rich
035 =Salt Lake
037 =San Juan
039 =Sanpete
041 =Sevier
043 =Summit
045 =Tooele
047 =Uintah
049 =Utah
051 =Wasatch
053 =Washington
055 =Wayne
057 =Weber

VERMONT - 50

001 =Addison
003 =Bennington
005 =Caledonia
007 =Chittenden
009 =Essex
011 =Franklin
013 =Grand Isle
015 =Lamoille
017 =Orange
019 =Orleans
021 =Rutland
023 =Washington
025 =Windham
027 =Windsor

VIRGINIA - 51

001 =Accomack
003 =Albemarle
005 =Alleghany
007 =Amelia
009 =Amherst
011 =Appomattox
013 =Arlington
015 =Augusta
017 =Bath
019 =Bedford
021 =Bland
023 =Botetourt
025 =Brunswick
027 =Buchanan
029 =Buckingham
031 =Campbell
033 =Caroline
035 =Carroll
036 =Charles City
037 =Charlotte
041 =Chesterfield
043 =Clarke
045 =Craig
047 =Culpeper

049 =Cumberland
051 =Dickenson
053 =Dinwiddie
057 =Essex
059 =Fairfax
061 =Fauquier
063 =Floyd
065 =Fluvanna
067 =Franklin
069 =Frederick
071 =Giles
073 =Gloucester
075 =Goochland
077 =Grayson
079 =Greene
081 =Greensville
083 =Halifax
085 =Hanover
087 =Henrico
089 =Henry
091 =Highland
093 =Isle of Wight
095 =James City
097 =King and Queen
099 =King George
101 =King William
103 =Lancaster
105 =Lee
107 =Loudoun
109 =Louisa
111 =Lunenburg
113 =Madison
115 =Mathews
117 =Mecklenburg
119 =Middlesex
121 =Montgomery
125 =Nelson
127 =New Kent
131 =Northampton
133 =Northumberland
135 =Nottoway
137 =Orange
139 =Page
141 =Patrick

143 =Pittsylvania
145 =Powhatan
147 =Prince Edward
149 =Prince George
153 =Prince William
155 =Pulaski
157 =Rappahannock
159 =Richmond
161 =Roanoke
163 =Rockbridge
165 =Rockingham
167 =Russell
169 =Scott
171 =Shenandoah
173 =Smyth
175 =Southampton
177 =Spotsylvania
179 =Stafford
181 =Surry
183 =Sussex
185 =Tazewell
187 =Warren
191 =Washington
193 =Westmoreland
195 =Wise
197 =Wythe
199 =York
510 =Alexandria
515 =Bedford
520 =Bristol
530 =Buena Vista
540 =Charlottesville
550 =Chesapeake
560 =Clifton Forge
570 =Colonial Heights
580 =Covington
590 =Danville
595 =Emporia
600 =Fairfax
610 =Falls Church
620 =Franklin
630 =Fredericksburg
640 =Galax
650 =Hampton

660 =Harrisonburg
670 =Hopewell
678 =Lexington
680 =Lynchburg
683 =Manassas
685 =Manassas Park
690 =Martinsville
700 =Newport News
710 =Norfolk
720 =Norton
730 =Petersburg
735 =Poquoson
740 =Portsmouth
750 =Radford
760 =Richmond
770 =Roanoke
775 =Salem
780 =South Boston
790 =Staunton
800 =Suffolk
810 =Virginia Beach
820 =Waynesboro
830 =Williamsburg
840 =Winchester

033 =King
035 =Kitsap
037 =Kittitas
039 =Klickitat
041 =Lewis
043 =Lincoln
045 =Mason
047 =Okanogan
049 =Pacific
051 =Pend Oreille
053 =Pierce
055 =San Juan
057 =Skagit
059 =Skamania
061 =Snohomish
063 =Spokane
065 =Stevens
067 =Thurston
069 =Wahkiakum
071 =Walla Walla
073 =Whatcom
075 =Whitman
077 =Yakima

WASHINGTON - 53

001 =Adams
003 =Asotin
005 =Benton
007 =Chelan
009 =Clallam
011 =Clark
013 =Columbia
015 =Cowlitz
017 =Douglas
019 =Ferry
021 =Franklin
023 =Garfield
025 =Grant
027 =Grays Harbor
029 =Island
031 =Jefferson

WEST VIRGINIA - 54

001 =Barbour
003 =Berkeley
005 =Boone
007 =Braxton
009 =Brooke
011 =Cabell
013 =Calhoun
015 =Clay
017 =Doddridge
019 =Fayette
021 =Gilmer
023 =Grant
025 =Greenbrier
027 =Hampshire
029 =Hancock
031 =Hardy
033 =Harrison

035 =Jackson
037 =Jefferson
039 =Kanawha
041 =Lewis
043 =Lincoln
045 =Logan
047 =McDowell
049 =Marion
051 =Marshall
053 =Mason
055 =Mercer
057 =Mineral
059 =Mingo
061 =Monongalia
063 =Monroe
065 =Morgan
067 =Nicholas
069 =Ohio
071 =Pendleton
073 =Pleasants
075 =Pocahontas
077 =Preston
079 =Putnam
081 =Raleigh
083 =Randolph
085 =Ritchie
087 =Roane
089 =Summers
091 =Taylor
093 =Tucker
095 =Tyler
097 =Upshur
099 =Wayne
101 =Webster
103 =Wetzel
105 =Wirt
107 =Wood
109 =Wyoming

WISCONSIN - 55

001 =Adams
003 =Ashland

005 =Barron
007 =Bayfield
009 =Brown
011 =Buffalo
013 =Burnett
015 =Calumet
017 =Chippewa
019 =Clark
021 =Columbia
023 =Crawford
025 =Dane
027 =Dodge
029 =Door
031 =Douglas
033 =Dunn
035 =Eau Claire
037 =Florence
039 =Fond du Lac
041 =Forest
043 =Grant
045 =Green
047 =Green Lake
049 =Iowa
051 =Iron
053 =Jackson
055 =Jefferson
057 =Juneau
059 =Kenosha
061 =Kewaunee
063 =La Crosse
065 =Lafayette
067 =Langlade
069 =Lincoln
071 =Manitowoc
073 =Marathon
075 =Marinette
077 =Marquette
078 =Menominee
079 =Milwaukee
081 =Monroe
083 =Oconto
085 =Oneida
087 =Outagamie
089 =Ozaukee

091 =Pepin
093 =Pierce
095 =Polk
097 =Portage
099 =Price
101 =Racine
103 =Richland
105 =Rock
107 =Rusk
109 =St. Croix
111 =Sauk
113 =Sawyer
115 =Shawano
117 =Sheboygan
119 =Taylor
121 =Trempealeau
123 =Vernon
125 =Vilas
127 =Walworth
129 =Washburn
131 =Washington
133 =Waukesha
135 =Waupaca
137 =Waushara
139 =Winnebago
141 =Wood

WYOMING - 56

001 =Albany
003 =Big Horn
005 =Campbell
007 =Carbon
009 =Converse
011 =Crook
013 =Fremont
015 =Goshen
017 =Hot Springs
019 =Johnson
021 =Laramie
023 =Lincoln
025 =Natrona
027 =Niobrara

029 =Park
031 =Platte
033 =Sheridan
035 =Sublette
037 =Sweetwater
039 =Teton
041 =Uinta
043 =Washakie
045 =Weston

AMER. SAMOA - 60

010 =Eastern
020 =Manu'a
030 =Rose
040 =Swains
050 =Western

GUAN - 66

010 =Guam

PUERTO RICO - 72

001 =Adjuntas
003 =Aguada
005 =Aguadilla
007 =Aguas Buenas
009 =Aibonito
011 =Añasco
013 =Arecibo
015 =Arroyo
017 =Barceloneta
019 =Barranquitas
021 =Bayamon
023 =Cabo Rojo
025 =Caguas
027 =Camuy
029 =Canovanas
031 =Carolina
033 =Cataño

035 =Cayey
037 =Ceiba
039 =Ciales
041 =Cidra
043 =Coamo
045 =Comerio
047 =Corozal
049 =Culebra
051 =Dorado
053 =Fajardo
054 =Florida
055 =Guanica
057 =Guayama
059 =Guayanilla
061 =Guaynabo
063 =Gurabo
065 =Hatillo
067 =Hormigueros
069 =Humacao
071 =Isabela
073 =Jayuya
075 =Juana Diaz
077 =Juncos
079 =Lajas
081 =Lares
083 =Las Marias
085 =Las Piedras
087 =Loiza
089 =Luquillo
091 =Manati
093 =Maricao
095 =Maunabo
097 =Mayagüez
099 =Moca
101 =Morovis
103 =Naguabo
105 =Naranjito
107 =Orocovis
109 =Patillas
111 =Peñuelas
113 =Ponce
115 =Quebradillas
117 =Rincon
119 =Rio Grande

121 =Sabana Grande
123 =Salinas
125 =San German
127 =San Juan
129 =San Lorenzo
131 =San Sebastian
133 =Santa Isabel
135 =Toa Alta
137 =Toa Baja
139 =Trujillo Alto
141 =Útuado
143 =Vega Alta
145 =Vega Baja
147 =Vieques
149 =Villalba
151 =Yabucoa
153 =Yauco

VIRGIN ISLANDS - 78

010 =St. Croix
020 =St. John
030 =St. Thomas

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